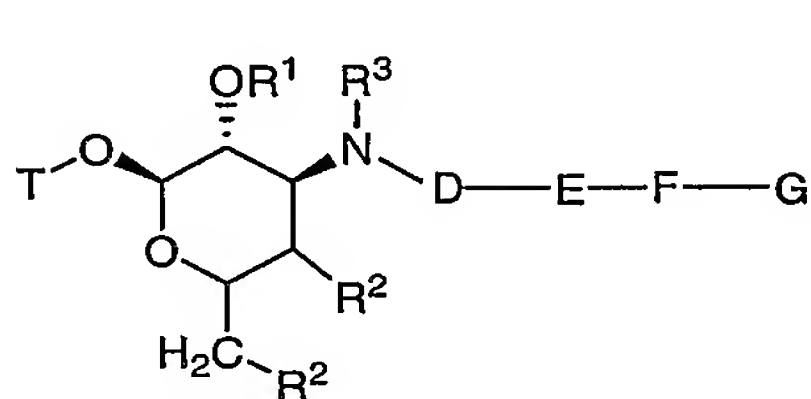


- 297 -

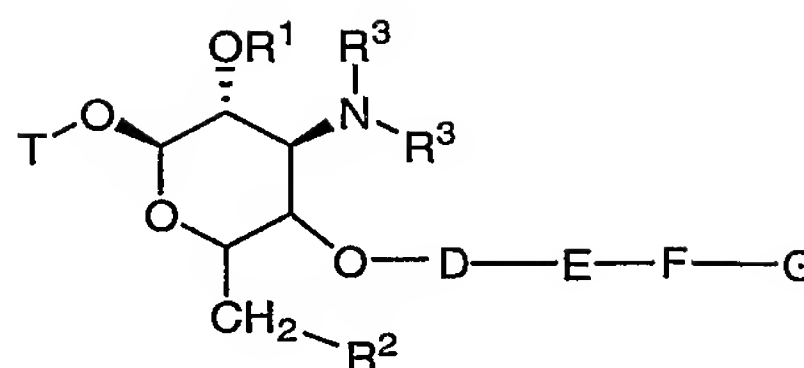
CLAIMS

1 What is claimed is:

1 1. A compound having the formula:



I



II

or

3 or a pharmaceutically acceptable salt, ester, *N*-oxide, or prodrug thereof,

4 wherein

5 T is a 14-, 15-, or 16-membered macrolide connected via a macrocyclic ring carbon atom;

6 R¹ and R³ independently are selected from the group consisting of: (a) H, (b) a
7 C₁₋₆ alkyl group, (c) a C₂₋₆ alkenyl group, (d) a C₂₋₆ alkynyl group, (e) -C(O)R⁵,
8 (f) -C(O)OR⁵, (g) -C(O)-NR⁴R⁴R⁴, (h) -C(S)R⁵, (i) -C(S)OR⁵, (j) -C(O)SR⁵, or (k) -C(S)-
9 NR⁴R⁴R⁴;

10 R² is hydrogen or -OR¹²;

11 D is selected from the group consisting of:

12 (a) a single bond, (b) a C₁₋₆ alkyl group, (c) a C₂₋₆ alkenyl group; (d) a C₂₋₆ alkynyl
13 group; (e) -C(O)-X-, (f) -C(O)O-X-, (g) -C(O)NR⁴R⁴-X-,
14 (h) -C(=NR⁴)-X-, (i) -C(=NR⁴)O-X-, (j) -C(=NR⁴)N-X-,
15 (k) -SO₂-X-, (l) -C(NR⁴)NR⁴-X-, (m) -C(S)-X-,
16 (n) -C(S)NR⁴-X-, (o) -C(NR⁴)S-X-, or (p) -C(O)S-X-, wherein

- 17 i) 0-2 carbon atoms in any of (b)-(d) of D immediately above
18 optionally is replaced by a moiety selected from the group
19 consisting of O, S(O)_p, and NR⁴,
20 ii) each of the groups (b)-(d) immediately above optionally is
21 substituted with one or more R⁵ groups,
22 iii) alternatively when R⁵ is present as an optional substituent on (b)-
23 (d), R³ and R⁵ can be taken together with the atoms to which they
24 are attached to form a 3-7 membered ring, and

- 298 -

- iv) X is selected from the group consisting of (aa) a C₁₋₆ alkyl group, (bb) a C₂₋₆ alkenyl group, or (cc) a C₂₋₆ alkynyl group, wherein each of groups (aa)–(cc) optionally is substituted with one or more R⁵ groups;

F is selected from the group consisting of:

- (a) a single bond, (b) a C₁₋₆ alkyl group, (c) a C₂₋₆ alkenyl group, (d) a C₂₋₆ alkynyl group, wherein

- i) 0-2 carbon atoms in any of (b)–(d) of F immediately above optionally is replaced by a moiety selected from the group consisting of O, S(O)_p, and NR⁴,
 ii) any of (b)–(d) of F immediately above optionally is substituted with one or more R⁵ groups, and
 iii) any of (b)–(d) of F immediately above optionally is substituted with C₁₋₆ alkyl-R⁵ groups;

E is selected from the group consisting of:

- (a) a 3-10 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
 (b) a 3-10 membered saturated, unsaturated, or aromatic carbocycle,
 (c) a –W–[3-10 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur],
 (d) a –W–[3-10 membered saturated, unsaturated, or aromatic carbocycle],
 (e) –C(O)–, (f) –C(O)O–, (g) –C(O)NR⁴–, (h) –C(=NR⁴)–,
 (i) –C(=NR⁴)O–, (j) –C(=NR⁴)NR⁴–, (k) –OC(O)–, (l) –OC(O)O–,
 (m) –OC(O)NR⁴–, (n) –NR⁴C(O)–, (o) –NR⁴C(O)O–,
 (p) –NR⁴C(O)NR⁴–, (q) –NR⁴C(=NR⁴)NR⁴–, (r) –S(O)_p–,
 (s) –NR⁴S(O)₂–, (t) –S(O)₂NR⁴–, (u) –C(N–OR⁴)–, (v) –CH₂–,
 (w) –C(N–NR⁴R⁴)–, (x) –C(S)NR⁴–, (y) –NR⁴C(S)–, (z) –C(S)O–, or
 (aa) –OC(S)–, wherein
 i) any of (a)–(d) immediately above optionally is substituted with one or more R⁵ groups; and

- 299 -

- 57 ii) W is selected from the group consisting of:
 58 (aa) $-\text{OCO}-$, (bb) $-\text{OC}(\text{O})\text{O}-$, (cc) $-\text{OC}(\text{O})\text{NR}^4-$,
 59 (dd) $-\text{NR}^4\text{C}(\text{O})\text{O}-$, (ee) $-\text{OCNOR}^4-$,
 60 (ff) $-\text{NR}^4-\text{C}(\text{O})\text{O}-$, (gg) $-\text{C}(\text{S})(\text{NR}^4)-$, (hh) $-\text{NR}^4-$,
 61 (ii) $-\text{OC}(\text{S})\text{O}-$, (jj) $-\text{OC}(\text{S})\text{NR}^4-$, (kk) $-\text{NR}^4\text{C}(\text{S})\text{O}-$, (ll) $-\text{OC}(\text{S})\text{NOR}^4-$, (mm) $-\text{C}(\text{S})\text{O}-$, (nn) $-\text{OC}(\text{S})-$, (oo) $-\text{C}(\text{O})-$, (pp) $-\text{C}(\text{O})\text{O}-$, (qq) $-\text{C}(\text{O})\text{NR}^4-$, (rr) $-\text{C}(=\text{NR}^4)-$,
 64 (ss) $-\text{C}(=\text{NR}^4)\text{O}-$, (tt) $-\text{C}(=\text{NR}^4)\text{NR}^4-$, (uu) $-\text{OC}(\text{O})-$, (vv) $-\text{OC}(\text{O})\text{O}-$, (ww) $-\text{OC}(\text{O})\text{NR}^4-$, (xx) $-\text{NR}^4\text{C}(\text{O})-$, (yy) $-\text{NR}^4\text{C}(\text{O})\text{O}-$, (zz) $-\text{NR}^4\text{C}(\text{O})\text{NR}^4-$, (aaa) $-\text{NR}^4\text{C}(=\text{NR}^4)\text{NR}^4-$,
 67 (bbb) $-\text{S}(\text{O})_p-$, (ccc) $-\text{NR}^4\text{S}(\text{O})_2-$, (ddd) $-\text{S}(\text{O})_2\text{NR}^4-$, (eee) $-\text{C}(\text{N}-\text{OR}^4)-$, (fff) $-\text{C}(\text{N}-\text{NR}^4\text{R}^4)-$, (ggg) $-\text{C}(\text{S})\text{NR}^4-$, or (hhh) $-\text{NR}^4\text{C}(\text{S})-$;

70 G is selected from the group consisting of: (a) B' and (b) B'-Z-B'', wherein

- 71 i) each B' and B'' is independently selected from the group consisting
 72 of (aa) an aryl group, (bb) a heteroaryl group, (cc) a biaryl group,
 73 (dd) a fused bicyclic or tricyclic saturated, unsaturated or aromatic
 74 ring system optionally containing one or more heteroatoms
 75 selected from the group consisting of nitrogen, oxygen, and sulfur,
 76 (ee) a 3-10 membered saturated or unsaturated heterocycle
 77 containing one or more heteroatoms selected from the group
 78 consisting of nitrogen, oxygen, and sulfur, (ff) a 3-10 membered
 79 saturated, or unsaturated carbocycle, wherein each (aa)-(ff)
 80 optionally is substituted with one or more R¹¹ groups; and
 81 ii) Z is selected from the group consisting of
 82 (aa) a single bond, (bb) a C₁₋₂ alkyl group, (cc) a C₂ alkenyl group,
 83 (dd) a C₂ alkynyl group, (ee) $-\text{C}(\text{O})-$, (ff) $-\text{C}(\text{O})\text{O}-$, (gg) $-\text{C}(\text{O})\text{NR}^4-$, (hh) $-\text{C}(=\text{NR}^4)-$, (ii) $-\text{C}(=\text{NR}^4)\text{O}-$, (jj) $-\text{C}(=\text{NR}^4)\text{NR}^4-$,
 85 , (kk) $-\text{S}(\text{O})_p-$, (ll) $-\text{OC}(\text{O})-$, (mm) $-\text{C}(\text{S})-$, (nn) $-\text{C}(\text{S})\text{NR}^4-$, (oo) $-\text{C}(\text{NR}^4)\text{S}-$, (pp) $-\text{C}(\text{O})\text{S}-$, (qq) $-\text{O}-$, (rr) $-\text{NR}^4-$, (ss) $-\text{NR}^4\text{C}(\text{O})-$,
 87 (tt) $-\text{OC}(\text{NR}^4)-$, (uu) $-\text{NC}(\text{NR}^4)-$, (vv) $-\text{C}(\text{S})\text{O}-$, (ww) $-\text{SC}(\text{O})-$,
 88 or (xx) $-\text{OC}(\text{S})-$;

- 300 -

89 R^4 , at each occurrence, independently is selected from the group consisting of:

- 90 (a) H, (b) a C_{1-6} alkyl group, (c) a C_{2-6} alkenyl group, (d) a C_{2-6} alkynyl group, (e)
91 a C_{6-10} saturated, unsaturated, or aromatic carbocycle, (f) a 3-12 membered
92 saturated, unsaturated, or aromatic heterocycle containing one or more
93 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
94 (g) $-C(O)-C_{1-6}$ alkyl, (h) $-C(O)-C_{2-6}$ alkenyl, (i) $-C(O)-C_{2-6}$ alkynyl, (j) $-C(O)-$
95 C_{6-10} saturated, unsaturated, or aromatic carbocycle, (k) $-C(O)-3-12$ membered
96 saturated, unsaturated, or aromatic heterocycle containing one or more
97 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
98 (l) $-C(O)O-C_{1-6}$ alkyl, (m) $-C(O)O-C_{2-6}$ alkenyl, (n) $-C(O)O-C_{2-6}$ alkynyl,
99 (o) $-C(O)O-C_{6-10}$ saturated, unsaturated, or aromatic carbocycle, (p) $-C(O)O-3-12$
100 membered saturated, unsaturated, or aromatic heterocycle containing one or more
101 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
102 and q) $-C(O)NR^6R^6$,

103 wherein any of (b)–(p) optionally is substituted with one or more R^5
104 groups,

105 alternatively, NR^4R^4 forms a 3-7 membered saturated, unsaturated or aromatic ring
106 including the nitrogen atom to which the R^4 groups are bonded, wherein said ring is optionally
107 substituted at a position other than the nitrogen atom to which the R^4 groups are bonded, with
108 one or more moieties selected from the group consisting of O, $S(O)_p$, N, and NR^8 ;

109 R^5 is selected from the group consisting of:

- 110 (a) R^7 , (b) a C_{1-8} alkyl group, (c) a C_{2-8} alkenyl group, (d) a C_{2-8} alkynyl group, (e)
111 a C_{3-12} saturated, unsaturated, or aromatic carbocycle, and (f) a 3-12 membered
112 saturated, unsaturated, or aromatic heterocycle containing one or more
113 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, or
114 two R^5 groups, when present on the same carbon atom can be taken together with
115 the carbon atom to which they are attached to form a spiro 3-6 membered
116 carbocyclic ring or heterocyclic ring containing one or more heteroatoms selected
117 from the group consisting of nitrogen, oxygen, and sulfur;

118 wherein any of (b)–(f) immediately above optionally is substituted with
119 one or more R^7 groups;

120 R^6 , at each occurrence, independently is selected from the group consisting of:

- 301 -

(a) H, (b) a C₁₋₆ alkyl group, (c) a C₂₋₆ alkenyl group, (d) a C₂₋₆ alkynyl group, (e) a C₃₋₁₀ saturated, unsaturated, or aromatic carbocycle, and (f) a 3-10 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, wherein any of (b)–(f) optionally is substituted with one or more moieties selected from the group consisting of:

(aa) a carbonyl group, (bb) a formyl group, (cc) F, (dd) Cl, (ee) Br, (ff) I, (gg) CN, (hh) NO₂, (ii) –OR⁸, (jj) –S(O)_pR⁸, (kk) –C(O)R⁸, (ll) –C(O)OR⁸, (mm) –OC(O)R⁸, (nn) –C(O)NR⁸R⁸, (oo) –OC(O)NR⁸R⁸, (pp) –C(=NR⁸)R⁸, (qq) –C(R⁸)(R⁸)OR⁸, (rr) –C(R⁸)₂OC(O)R⁸, (ss) –C(R⁸)(OR⁸)(CH₂)_rNR⁸R⁸, (tt) –NR⁸R⁸, (uu) –NR⁸OR⁸, (vv) –NR⁸C(O)R⁸, (ww) –NR⁸C(O)OR⁸, (xx) –NR⁸C(O)NR⁸R⁸, (yy) –NR⁸S(O)_rR⁸, (zz) –C(OR⁸)(OR⁸)R⁸, (ab) –C(R⁸)₂NR⁸R⁸, (ac) =NR⁸, (ad) –C(S)NR⁸R⁸, (ae) –NR⁸C(S)R⁸, (af) –OC(S)NR⁸R⁸, (ag) –NR⁸C(S)OR⁸, (ah) –NR⁸C(S)NR⁸R⁸, (ai) –SC(O)R⁸, (aj) a C₁₋₈ alkyl group, (ak) a C₂₋₈ alkenyl group, (al) a C₂₋₈ alkynyl group, (am) a C₁₋₈ alkoxy group, (an) a C₁₋₈ alkylthio group, (ao) a C₁₋₈ acyl group, (ap) –CF₃, (aq) –SCF₃, (ar) a C₃₋₁₀ saturated, unsaturated, or aromatic carbocycle, and (as) a 3-10 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,

alternatively, NR⁶R⁶ forms a 3-10 membered saturated, unsaturated or aromatic ring including the nitrogen atom to which the R⁶ groups are attached wherein said ring is optionally substituted at a position other than the nitrogen atom to which the R⁶ groups are bonded, with one or more moieties selected from the group consisting of O, S(O)_p, N, and NR⁸;

alternatively, CR⁶R⁶ forms a carbonyl group;

- 302 -

R^7 , at each occurrence, is selected from the group consisting of:

- (a) H, (b) =O, (c) F, (d) Cl, (e) Br, (f) I, (g) $-CF_3$,
 (h) $-CN$, (i) $-N_3$ (j) $-NO_2$, (k) $-NR^6(CR^6R^6)_tR^9$, (l) $-OR^9$, (m) $-S(O)_pC(R^6R^6)_tR^9$,
 (n) $-C(O)(CR^6R^6)_tR^9$, (o) $-OC(O)(CR^6R^6)_tR^9$, (p) $-SC(O)(CR^6R^6)_tR^9$, (q) $-$
 $C(O)O(CR^6R^6)_tR^9$, (r) $-NR^6C(O)(CR^6R^6)_tR^9$, (s) $-C(O)NR^6(CR^6R^6)_tR^9$, (t) $-$
 $C(=NR^6)(CR^6R^6)_tR^9$, (u) $-C(=NNR^6R^6)(CR^6R^6)_tR^9$, (v) $-$
 $C(=NNR^6C(O)R^6)(CR^6R^6)_tR^9$, (w) $-C(=NOR^9)(CR^6R^6)_tR^9$, (x) $-$
 $NR^6C(O)O(CR^6R^6)_tR^9$, (y) $-OC(O)NR^6(CR^6R^6)_tR^9$, (z) $-$
 $NR^6C(O)NR^6(CR^6R^6)_tR^9$, (aa) $-NR^6S(O)_p(CR^6R^6)_tR^9$, (bb) $-$
 $S(O)_pNR^6(CR^6R^6)_tR^9$, (cc) $-NR^6S(O)_pNR^6(CR^6R^6)_tR^9$, (dd) $-NR^6R^6$, (ee) $-$
 $NR^6(CR^6R^6)$, (ff) $-OH$, (gg) $-NR^6R^6$, (hh) $-OCH_3$, (ii) $-S(O)_pR^6$, (jj) $-NC(O)R^6$,
 (kk) a C_{1-6} alkyl group, (ll) a C_{2-6} alkenyl group, (mm) a C_{2-6} alkynyl group, (nn) $-$
 C_{3-10} saturated, unsaturated, or aromatic carbocycle, and (oo) 3-10 membered
 saturated, unsaturated, or aromatic heterocycle containing one or more
 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
 wherein any of (kk)–(oo) optionally is substituted with one or more R^9
 groups;

alternatively, two R^7 groups may form $-O(CH_2)_uO-$;

R^8 is selected from the group consisting of:

- (a) R^5 , (b) H, (c) a C_{1-6} alkyl group, (d) a C_{2-6} alkenyl group, (e) a C_{2-6} alkynyl
 group, (f) a C_{3-10} saturated, unsaturated, or aromatic carbocycle, (g) a 3-10
 membered saturated, unsaturated, or aromatic heterocycle containing one or more
 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
 (h) $-C(O)-C_{1-6}$ alkyl, (i) $-C(O)-C_{1-6}$ alkenyl, (j) $-C(O)-C_{1-6}$ alkynyl, (k) $-C(O)-$
 C_{3-10} saturated, unsaturated, or aromatic carbocycle, and (l) $-C(O)-3-10$
 membered saturated, unsaturated, or aromatic heterocycle containing one or more
 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
 wherein any of (c)–(k) optionally is substituted with one or more moieties
 selected from the group consisting of : (aa) H, (bb) F, (cc) Cl, (dd) Br, (ee)
 I, (ff) CN, (gg) NO_2 , (hh) OH, (ii) NH_2 , (jj) $NH(C_{1-6}$ alkyl), (kk)
 $N(C_{1-6}$ alkyl) $_2$, (ll) a C_{1-6} alkoxy group, (mm) an aryl group, (nn) a

- 303 -

184 substituted aryl group, (oo) a heteroaryl group, (pp) a substituted
 185 heteroaryl group, and qq) a C₁₋₆ alkyl group optionally substituted with
 186 one or more moieties selected from the group consisting of an aryl group,
 187 a substituted aryl group, a heteroaryl group, a substituted heteroaryl group,
 188 F, Cl, Br, I, CN, NO₂, CF₃, SCF₃, and OH;

189 R⁹, at each occurrence, independently is selected from the group consisting of:
 190 (a) R¹⁰, (b) a C₁₋₆ alkyl group, (c) a C₂₋₆ alkenyl group, (d) a C₂₋₆ alkynyl group, e)
 191 a C₃₋₁₀ saturated, unsaturated, or aromatic carbocycle, and f) a 3-10 membered
 192 saturated, unsaturated, or aromatic heterocycle containing one or more
 193 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
 194 wherein any of (b)–(f) optionally is substituted with one or more R¹⁰
 195 groups;

196 R¹⁰, at each occurrence, independently is selected from the group consisting of:
 197 (a) H, (b) =O, (c) F, (d) Cl, (e) Br, (f) I, (g) –CF₃, (h) –CN, (i) –NO₂, (j) –NR⁶R⁶,
 198 (k) –OR⁶, (l) –S(O)_pR⁶, (m) –C(O)R⁶, (n) –C(O)OR⁶, (o) –OC(O)R⁶, (p)
 199 NR⁶C(O)R⁶, (q) –C(O)NR⁶R⁶, (r) –C(=NR⁶)R⁶, (s) –NR⁶C(O)NR⁶R⁶, (t) –
 200 NR⁶S(O)_pR⁶, (u) –S(O)_pNR⁶R⁶, (v) –NR⁶S(O)_pNR⁶R⁶, (w) a C₁₋₆ alkyl group,
 201 (x) a C₂₋₆ alkenyl group, (y) a C₂₋₆ alkynyl group, (z) a C₃₋₁₀ saturated,
 202 unsaturated, or aromatic carbocycle, and (aa) a 3-10 membered saturated,
 203 unsaturated, or aromatic heterocycle containing one or more heteroatoms selected
 204 from the group consisting of nitrogen, oxygen, and sulfur,
 205 wherein any of (w)–(aa) optionally is substituted with one or more
 206 moieties selected from the group consisting of R⁶, F, Cl, Br, I, CN, NO₂, –
 207 OR⁶, –NH₂, –NH(C₁₋₆ alkyl), –N(C₁₋₆ alkyl)₂, a C₁₋₆ alkoxy group, a
 208 C₁₋₆ alkylthio group, and a C₁₋₆ acyl group;

209 R¹¹ each occurrence, independently is selected from the group consisting of:
 210 (a) a carbonyl group, (b) a formyl group, (c) F, (d) Cl, (e) Br, (f) I, (g) CN, (h)
 211 NO₂, (i) OR⁸, (j) –S(O)_pR⁸, (k) –C(O)R⁸, (l) –C(O)OR⁸,
 212 (m) –OC(O)R⁸, (n) –C(O)NR⁸R⁸, (o) –OC(O)NR⁸R⁸,
 213 (p) –C(=NR⁸)R⁸, (q) –C(R⁸)(R⁸)OR⁸, (r) –C(R⁸)₂OC(O)R⁸,
 214 (s) –C(R⁸)(OR⁸)(CH₂)_rNR⁸R⁸, (t) –NR⁸R⁸, (u) –NR⁸OR⁸,

- 304 -

(v) $-\text{NR}^8\text{C}(\text{O})\text{R}^8$, (w) $-\text{NR}^8\text{C}(\text{O})\text{OR}^8$, (x) $-\text{NR}^8\text{C}(\text{O})\text{NR}^8\text{R}^8$, (y) $-\text{NR}^8\text{S}(\text{O})_r\text{R}^8$, (z) $-\text{C}(\text{OR}^8)(\text{OR}^8)\text{R}^8$, (aa) $-\text{C}(\text{R}^8)_2\text{NR}^8\text{R}^8$, (bb) $=\text{NR}^8$, (cc) $-\text{C}(\text{S})\text{NR}^8\text{R}^8$, (dd) $-\text{NR}^8\text{C}(\text{S})\text{R}^8$, (ee) $-\text{OC}(\text{S})\text{NR}^8\text{R}^8$, (ff) $-\text{NR}^8\text{C}(\text{S})\text{OR}^8$, (gg) $-\text{NR}^8\text{C}(\text{S})\text{NR}^8\text{R}^8$, (hh) $-\text{SC}(\text{O})\text{R}^8$, (ii) a C_{1-8} alkyl group, (jj) a C_{2-8} alkenyl group, (kk) a C_{2-8} alkynyl group, (ll) a C_{1-8} alkoxy group, (mm) a C_{1-8} alkylthio group, (nn) a C_{1-8} acyl group, (oo) a C_{3-10} saturated, unsaturated, or aromatic carbocycle, and (pp) a 3-10 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, wherein (ii)-(kk) optionally are substituted with one or more R^5 groups;

R^{12} is selected from the group consisting of:

(a) H, (b) a C_{1-6} alkyl group, (c) a C_{2-6} alkenyl group, (d) a C_{2-6} alkynyl group, (e) $-\text{C}(\text{O})\text{R}^5$, (f) $-\text{C}(\text{O})\text{OR}^5$, (g) $-\text{C}(\text{O})-\text{NR}^4\text{R}^4\text{R}^4\text{R}^4$, (h) $-\text{C}(\text{S})\text{R}^5$, (i) $-\text{C}(\text{S})\text{OR}^5$, (j) $-\text{C}(\text{O})\text{SR}^5$, (k) $-\text{C}(\text{S})-\text{NR}^4\text{R}^4\text{R}^4\text{R}^4$, (l) a C_{3-10} saturated, unsaturated, or aromatic carbocycle, or (m) a 3-10 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, (n) a $-(\text{C}_{1-6} \text{ alkyl})-\text{C}_{3-10}$ saturated, unsaturated, or aromatic carbocycle, or (o) a $-(\text{C}_{1-6} \text{ alkyl})-3-10$ membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, wherein (a)-(d) and (l)-(o) optionally are substituted with one or more R^5 groups;

p at each occurrence is 0, 1, or 2;

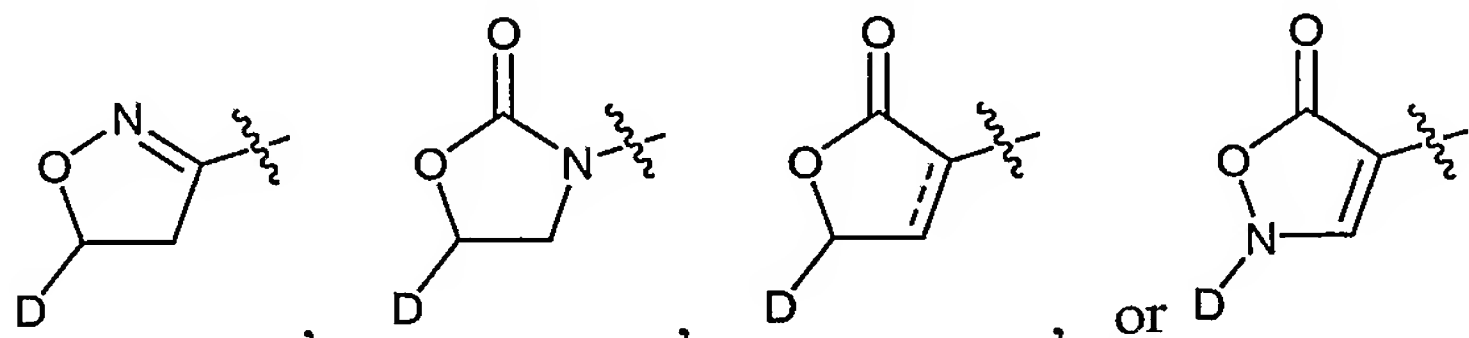
r at each occurrence is 0, 1, or 2;

t at each occurrence is 0, 1, or 2;

u at each occurrence is 1, 2, 3, or 4;

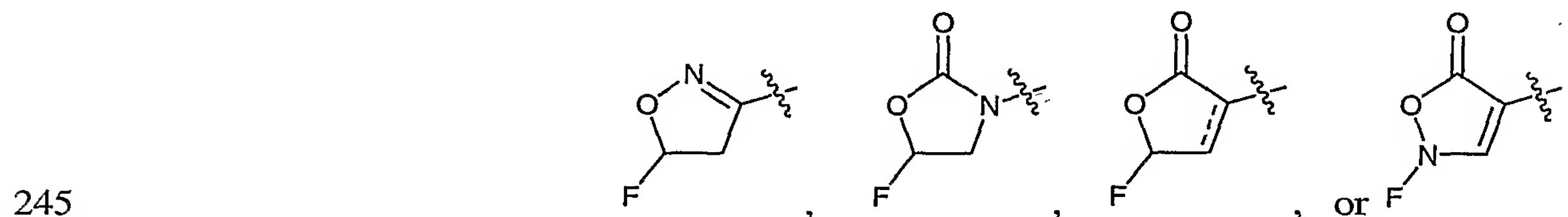
provided that

i) when T is a 14 or 15 membered macrolide D-E is not



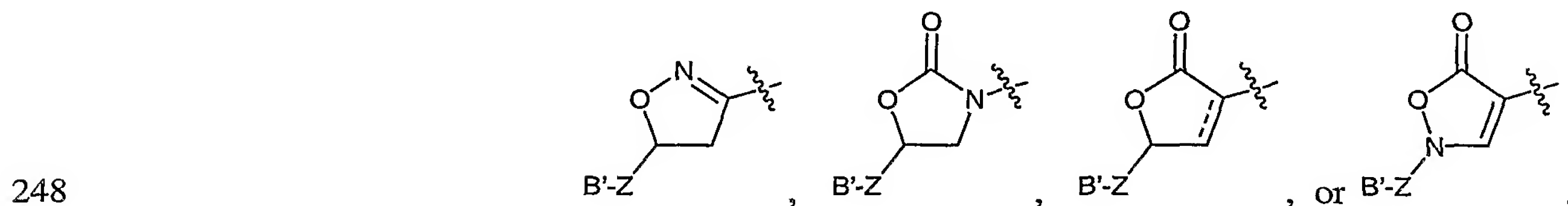
- 305 -

244 ii) when T is a 14 or 15 membered macrolide F-B' is not



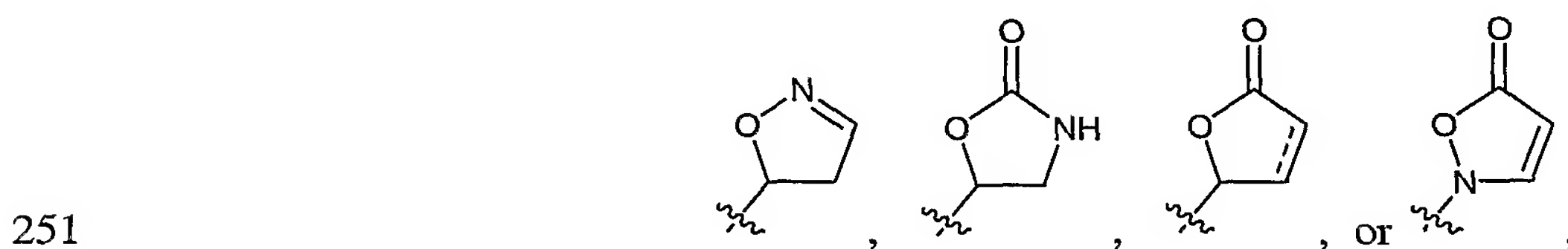
246

247 iii) when T is a 14 or 15 membered macrolide B'-Z-B'' is not



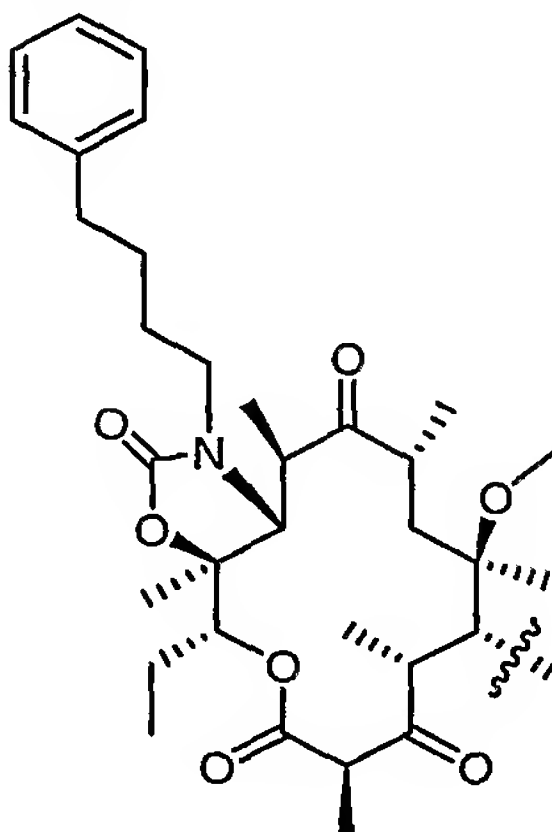
249

250 iv) when T is a 14 or 15 membered macrolide R¹¹ is not



252

v) when the compound has formula I and T is



253

254 D is not a single bond or a -CH₂-,

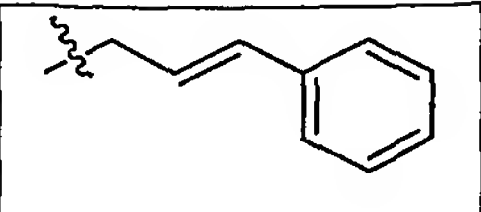
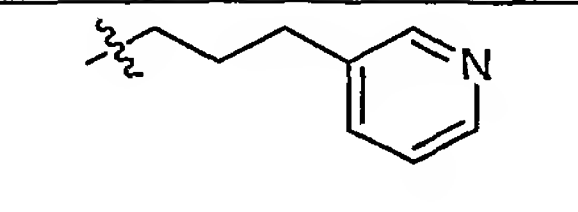
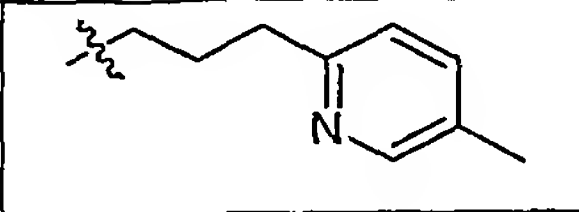
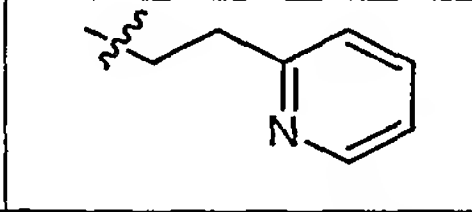
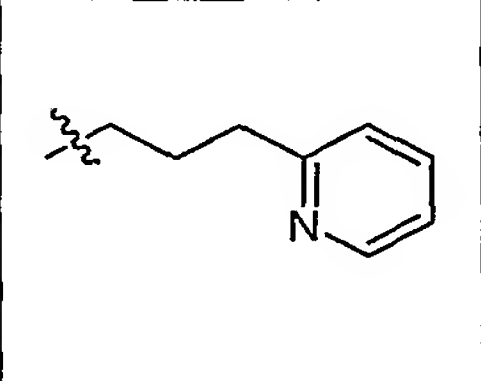
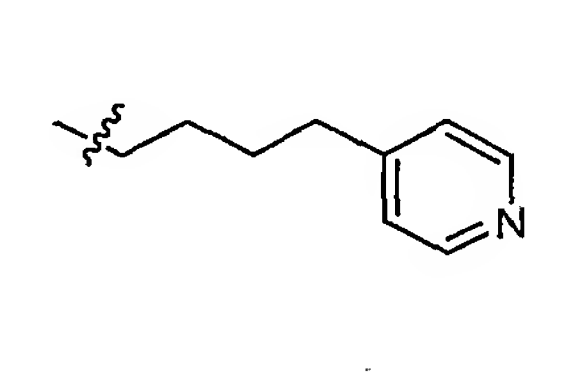
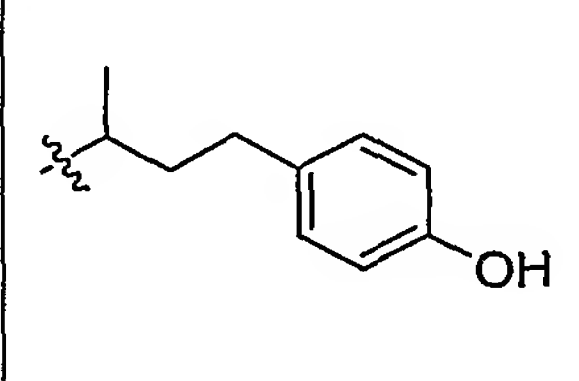
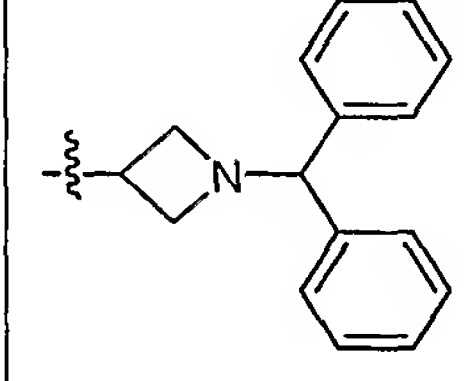
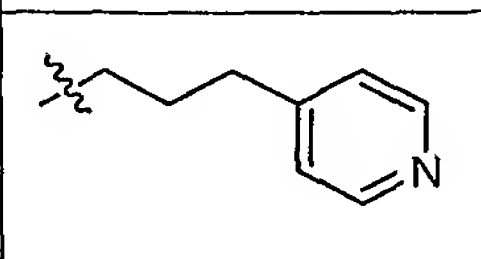
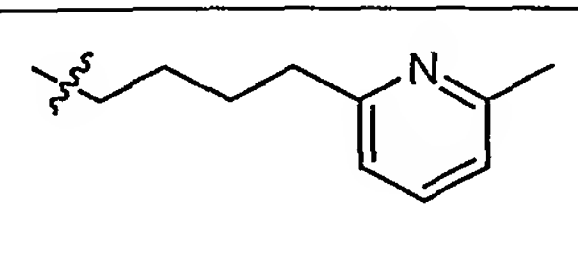
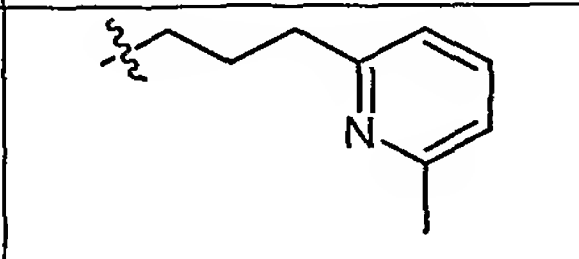
255 vi) when the compound has formula I and T is a 14 or 15 membered
256 macrolide -D-E-F- is not a -CH₂-,

257 vii) when the compound has formula I and T is a 14 or 15 membered

258 macrolide -D-E-F-G- is not a chemical moiety selected from the
259 chemical moieties listed in Table

- 306 -

Table A

, and

viii) when the compound has formula II and T is a 16 membered macrolide

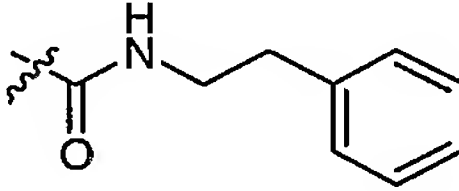
i. -D-E- is not a glycoside attached via its anomeric carbon,

ii. -D-E-F-G is not a C₁₋₄ (alkyl), C₂₋₄(alkenyl), or C₂₋₄(alkynyl) chain bonded to a 5-10 membered monocyclic or bicyclic carbocycle or heterocycle or bonded to a 5 or 6 membered carbocycle or heterocycle further bonded to a 5 or 6 membered carbocycle or heterocycle, any of said carbocycles or heterocycles being optionally substituted with one or more groups selected from the group consisting of (aa) -OH, (bb) -F, (cc) -Cl, (dd) -I, and (ee) -NO₂, and

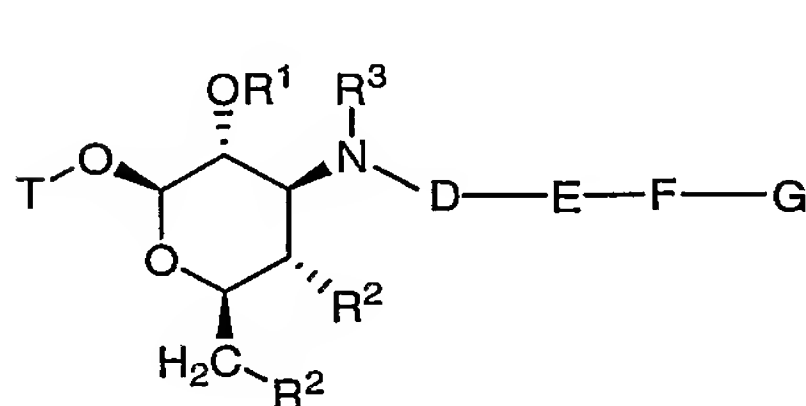
iii. -D-E-F-G- is not a chemical moiety selected from the chemical moieties listed in Table B.

278

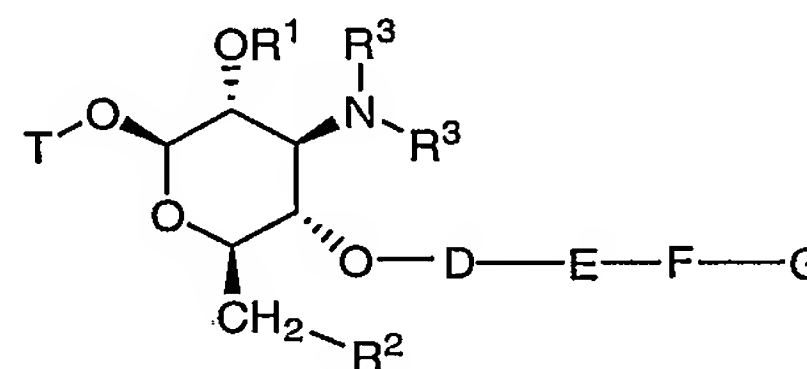
Table B

	-(t-butoxycarboxy)-3-(3-quinolyl)
-----------------------------------------------------------------------------------	-----------------------------------

- 1 2. A compound according to claim 1, having the formula:



I

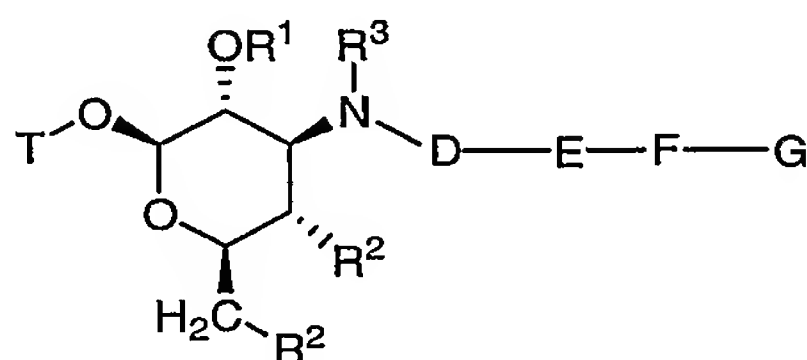


II

or

- 2
3 or a pharmaceutically acceptable salt, ester, *N*-oxide, or prodrug thereof wherein T, D, E, F, G,
4 R^1 , R^2 and R^3 are as described in claim 1.

- 1 3. A compound according to claim 1 or 2 having the formula:

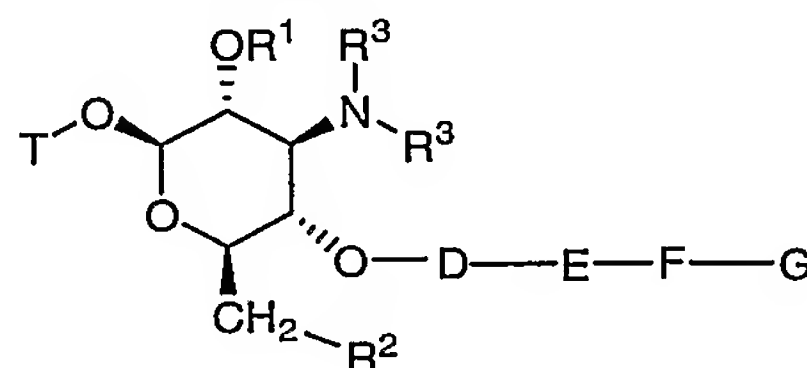


I

2

- 3 or a pharmaceutically acceptable salt, ester, *N*-oxide, or prodrug thereof wherein T, D, E, F, G,
4 R^1 , R^2 and R^3 are as described in claim 1.

- 1 4. A compound according to claim 1 or 2 having the formula:



II

2

- 308 -

3 or a pharmaceutically acceptable salt, ester, *N*-oxide, or prodrug thereof wherein T, D, E, F, G,
4 R^1 , R^2 and R^3 are as described in claim 1.

1 5. A compound according to any one of claims 1-4, wherein T is a 14- or 15-
2 membered macrolide connected via a macrocyclic ring carbon atom.

1 6. A compound according to any one of claims 1-5, wherein G is B'.

1 7. A compound according to claim 6 wherein B' is selected from the group
2 consisting of: (a) an aryl group, (b) a heteroaryl group, (c) a biaryl group, and (d) a fused bicyclic
3 or tricyclic unsaturated or aromatic ring system optionally containing one or more carbonyl
4 groups and one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and
5 sulfur, wherein each (a)-(d) optionally is substituted with one or more R^{11} groups.

1 8. A compound according to claim 6, wherein E is

2 (a) a 3-10 membered saturated, unsaturated, or aromatic heterocycle containing
3 one or more heteroatoms selected from the group consisting of nitrogen, oxygen,
4 and sulfur,

5 (b) a 3-10 membered saturated, unsaturated, or aromatic carbocycle,

6 (c) a $-W-$ [3-10 membered saturated, unsaturated, or aromatic heterocycle
7 containing one or more heteroatoms selected from the group consisting of
8 nitrogen, oxygen, and sulfur],

9 (d) a $-W-$ [3-10 membered saturated, unsaturated, or aromatic carbocycle],

10 (e) $-C(O)-$, (f) $-C(O)O-$, (g) $-C(O)NR^4-$, (h) $-C(=NR^4)-$,

11 (i) $-C(=NR^4)O-$, (j) $-C(=NR^4)NR^4-$, (k) $-OC(O)-$, (l) $-OC(O)O-$,

12 (m) $-OC(O)NR^4-$, (n) $-NR^4C(O)-$, (o) $-NR^4C(O)O-$,

13 (p) $-NR^4C(O)NR^4-$, (q) $-NR^4C(=NR^4)NR^4-$, (r) $-S(O)_p-$,

14 (s) $-NR^4S(O)_2-$, (t) $-S(O)_2NR^4-$, (u) $-C(N-OR^4)-$, (v) $-C(N-NR^4R^4)-$,

15 (w) $-C(S)NR^4-$, (x) $-NR^4C(S)-$, (y) $-C(S)O-$, or (z) $-OC(S)-$, wherein

16 i) any of (a)-(d) immediately above optionally is substituted with one
17 or more R^5 groups; and

18 ii) W is selected from the group consisting of:

19 (aa) $-OCO-$, (bb) $-OC(O)O-$, (cc) $-OC(O)NR^4-$, (dd) $-$

20 $NR^4C(O)O-$, (ee) $-OCNOR^4-$, (ff) $-NR^4-C(O)O-$, (gg) $-$

21 $C(S)(NR^4)-$, (hh) $-NR^4-$, (ii) $-OC(S)O-$, (jj) $-OC(S)NR^4-$, (kk) $-$

22 $NR^4C(S)O-$, (ll) $-OC(S)NOR^4-$, (mm) $-C(S)O-$, (nn) $-OC(S)-$,

- 309 -

(oo) $-\text{C}(\text{O})-$, (pp) $-\text{C}(\text{O})\text{O}-$, (qq) $-\text{C}(\text{O})\text{NR}^4-$, (rr) $-\text{C}(=\text{NR}^4)-$,
 (ss) $-\text{C}(=\text{NR}^4)\text{O}-$, (tt) $-\text{C}(=\text{NR}^4)\text{NR}^4-$, (uu) $-\text{OC}(\text{O})-$, (vv) $-\text{OC}(\text{O})\text{O}-$, (ww) $-\text{OC}(\text{O})\text{NR}^4-$, (xx) $-\text{NR}^4\text{C}(\text{O})-$, (yy) $-\text{NR}^4\text{C}(\text{O})\text{O}-$, (zz) $-\text{NR}^4\text{C}(\text{O})\text{NR}^4-$, (aaa) $-\text{NR}^4\text{C}(=\text{NR}^4)\text{NR}^4-$,
 (bbb) $-\text{S}(\text{O})_p-$, (ccc) $-\text{NR}^4\text{S}(\text{O})_2-$, (ddd) $-\text{S}(\text{O})_2\text{NR}^4-$, (eee) $-\text{C}(\text{N}-\text{OR}^4)-$, (fff) $-\text{C}(\text{N}-\text{NR}^4\text{R}^4)-$, (ggg) $-\text{C}(\text{S})\text{NR}^4-$, or (hhh) $-\text{NR}^4\text{C}(\text{S})-$.

9. A compound according to any one of claims 1-8, wherein

D is selected from the group consisting of (a) a C_{1-6} alkyl group, (b) a C_{2-6} alkenyl group, and (c) a C_{2-6} alkynyl group, wherein

- i) 0-2 carbon atoms in any of (a)–(c) of D immediately above optionally is replaced by a moiety selected from the group consisting of O, $\text{S}(\text{O})_p$, and NR^4 ,
- ii) any of (a)–(c) of D immediately above optionally is substituted with one or more R^5 groups; and

F is selected from the group consisting of (a) a single bond, (b) a C_{1-6}

alkyl group, (c) a C_{2-6} alkenyl group, and (d) a C_{2-6} alkynyl group, wherein

- i) 0-2 carbon atoms in any of (b)–(d) of F immediately above optionally is replaced by a moiety selected from the group consisting of O, $\text{S}(\text{O})_p$, and NR^4 ;
- ii) any of (b)–(d) of F immediately above optionally is substituted with one or more R^5 groups; and
- iii) any of (b)–(d) of F immediately above optionally is substituted with C_{1-6} alkyl- R^5 .

10. A compound according to claim 9, wherein

E is selected from the group consisting of:

- (a) a 3-10 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
- (b) a 3-10 membered saturated, unsaturated, or aromatic carbocycle,

- 310 -

(c) a $-W-[3-10]$ membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur],

(d) a $-W-[3-10]$ membered saturated, unsaturated, or aromatic carbocycle],

(e) $-C(O)-$, (f) $-C(O)O-$, (g) $-C(O)NR^4-$, (h) $-C(=NR^4)-$, (i) $-C(=NR^4)O-$, (j) $-C(=NR^4)NR^4-$, (k) $-OC(O)-$, (l) $-OC(O)O-$, (m) $-OC(O)NR^4-$, (n) $-NR^4C(O)-$, (o) $-NR^4C(O)O-$, (p) $-NR^4C(O)NR^4-$, (q) $-NR^4C(=NR^4)NR^4-$, (r) $-S(O)_p-$, (s) $-NR^4S(O)_2-$, (t) $-S(O)_2NR^4-$, (u) $-C(N-OR^4)-$, (v) $-CH_2-$, (w) $-C(N-NR^4R^4)-$, (x) $-C(S)NR^4$, (Y) $-NR^4C(S)-$, (Z) $-C(S)O-$, or (aa) $-OC(S)-$, wherein

i) any of (a)-(d) immediately above optionally is substituted with one or more R^5 groups; and

ii) W is selected from the group consisting of:

(aa) $-OCO-$, (bb) $-OC(O)O-$, (cc) $-OC(O)NR^4-$, (dd) $-NR^4C(O)O-$, (ee) $-OCNOR^4-$, (ff) $-NR^4-C(O)O-$, (gg) $-C(S)(NR^4)-$, (hh) $-NR^4$, (ii) $-OC(S)O-$, (jj) $-OC(S)NR^4-$, (kk) $-NR^4C(S)O-$, (ll) $-OC(S)NOR^4-$, (mm) $-C(S)O-$, (nn) $-OC(S)$, (oo) $-C(O)-$, (pp) $-C(O)O-$, (qq) $-C(O)NR^4-$, (rr) $-C(=NR^4)-$, (ss) $-C(=NR^4)O-$, (tt) $-C(=NR^4)NR^4-$, (uu) $-OC(O)-$, (vv) $-OC(O)O-$, (ww) $-OC(O)NR^4-$, (xx) $-NR^4C(O)-$, (yy) $-NR^4C(O)O-$, (zz) $-NR^4C(O)NR^4-$, (aaa) $-NR^4C(=NR^4)NR^4-$, (bbb) $-S(O)_p-$, (ccc) $-NR^4S(O)_2-$, (ddd) $-S(O)_2NR^4-$, (eee) $-C(N-OR^4)-$, (fff) $-C(N-NR^4R^4)-$, (ggg) $-C(S)NR^4-$, or (hhh) $-NR^4C(S)-$.

11. A compound according to claim 10, wherein

E is selected from the group consisting of:

(a) a 3-10 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, and

(b) a 3-10 membered saturated, unsaturated, or aromatic carbocycle,

- 311 -

wherein (a) and (b) immediately above optionally is substituted with one more R^5 groups.

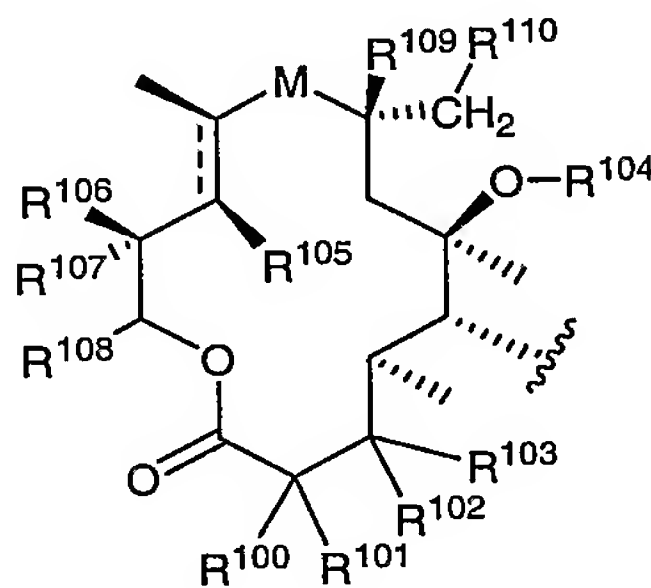
12. A compound according to claim 9, wherein

E is selected from the group consisting of:

(a) $-C(O)-$, (b) $-C(O)O-$, (c) $-C(O)NR^4-$, (d) $-C(=NR^4)-$,
 (e) $-C(=NR^4)O-$, (f) $-C(=NR^4)NR^4-$, (g) $-OC(O)-$, (h) $-OC(O)O-$, (i) $-OC(O)NR^4-$, (j) $-NR^4C(O)-$, (k) $-NR^4C(O)O-$, (l) $-NR^4C(O)NR^4-$, (m) $-NR^4C(=NR^4)NR^4-$, (n) $-S(O)_p-$, (o) $-NR^4S(O)_2-$, (p) $-S(O)_2NR^4-$, (q) $-C(N-OR^4)-$, (r) $-CH_2-$, (s) $-C(N-NR^4R^4)-$, (t), $-C(S)NR^4$, (u) $-NR^4C(S)-$, (v) $-C(S)O$, and (w) $-OC(S)-$.

13. A compound according to any one of according to any one of claims 1-12,

wherein T is:



or an *N*-oxide, pharmaceutically acceptable salt, ester or prodrug thereof,

wherein:

M is selected from the group consisting of:

(a) $-C((O)-$, (b) $-CH(-OR^{114})-$, (c) $-NR^{114}-CH_2-$, (d) $-CH_2-NR^{114}-$, (e) $-CH(NR^{114}R^{114})-$, (f) $-C(=NNR^{114}R^{114})-$, (g) $-NR^{114}-C(O)-$, (h) $-C(O)NR^{114}-$, (i) $-C(=NR^{114})-$, and (j) $-CR^{115}R^{115}-$, (k) $-C(=NOR^{127})-$;

R^{100} is selected from the group consisting of H and C_{1-6} alkyl;

R^{101} is selected from the group consisting of:

(a) H, (b) Cl, (c) F, (d) Br, (e) I, (f) $-NR^{114}R^{114}$, (g) $-NR^{114}C(O)R^{114}$, (h) $-OR^{114}$,
 (i) $-OC(O)R^{114}$, (j) $-OC(O)OR^{114}$, (k) $-OC(O)NR^{114}R^{114}$, (l) $-O-C_{1-6}$ alkyl,
 (m) $-OC(O)-C_{1-6}$ alkyl, (n) $-OC(O)O-C_{1-6}$ alkyl, (o) $-OC(O)NR^{114}-C_{1-6}$ alkyl,
 (p) C_{1-6} alkyl, (q) C_{1-6} alkenyl, (r) C_{1-6} alkynyl,

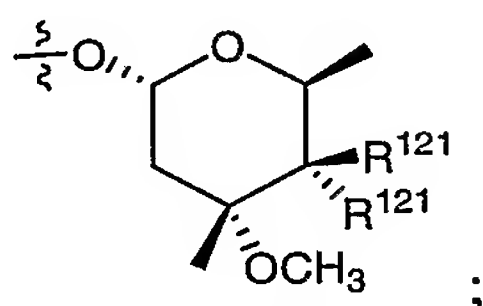
- 312 -

wherein any of (l) – (r) optionally is substituted with one or more R^{115} groups;

R^{102} is H;

R^{103} is selected from the group consisting of:

- (a) H, (b) $-OR^{114}$, (c) $-O-C_{1-6}$ alkyl- R^{115} , (d) $-OC((O)R^{114})$,
 (e) $-OC(O)-C_{1-6}$ alkyl- R^{115} , (f) $-OC(O)OR^{114}$, (g) $-OC(O)O-C_{1-6}$ alkyl- R^{115} ,
 (h) $-OC(O)NR^{114}R^{114}$, (i) $-OC(O)NR^{114}-C_{1-6}$ alkyl- R^{115} , and
 (j)



alternatively, R^{102} and R^{103} taken together form a carbonyl group;

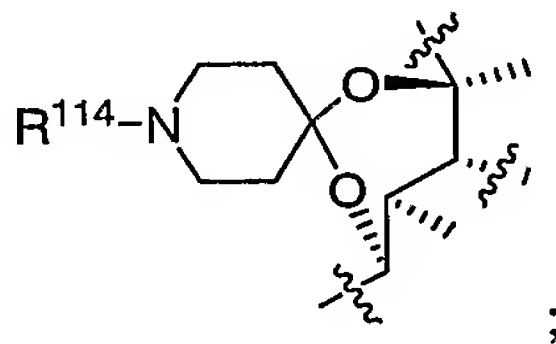
alternatively, R^{101} and R^{103} taken together are a single bond between the respective carbons to which these two groups are attached thereby creating a double bond between the carbons to which R^{100} and R^{102} are attached;

alternatively, R^{101} and R^{103} taken together are an epoxide moiety.

R^{104} is selected from the group consisting of:

- (a) H, (b) R^{114} , (c) $-C(O)R^{114}$, (d) $-C(O)OR^{114}$, (e) $-C(O)NR^{114}R^{114}$, (f) $-C_{1-6}$ alkyl- $K-R^{114}$, (g) $-C_{2-6}$ alkenyl- $K-R^{114}$, and (h) $-C_{2-6}$ alkynyl- $K-R^{114}$;

alternatively R^{103} and R^{104} , taken together with the atoms to which they are bonded, form:



K is selected from the group consisting of:

- (a) $-C(O)-$, (b) $-C(O)O-$, (c) $-C(O)NR^{114}-$, (d) $-C(=NR^{114})-$, (e) $-C(=NR^{114})O-$,
 (f) $-C(=NR^{114})NR^{114}-$, (g) $-OC(O)-$, (h) $-OC(O)O-$, (i) $-OC(O)NR^{114}-$,
 (j) $-NR^{114}C(O)-$, (k) $-NR^{114}C(O)O-$, (l) $-NR^{114}C(O)NR^{114}-$,
 (m) $-NR^{114}C(=NR^{114})NR^{114}-$, and (o) $-S(O)_p-$;

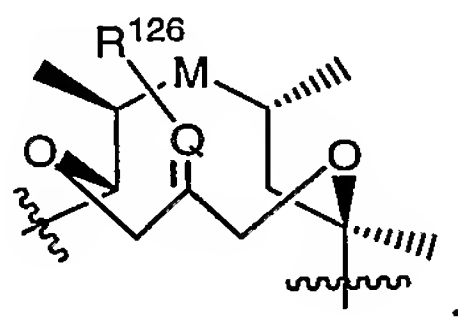
- 313 -

R^{105} is selected from the group consisting of:

- (a) R^{114} , (b) $-OR^{114}$, (c) $-NR^{114}R^{114}$, (d) $-O-C_{1-6}$ alkyl- R^{115} , (e) $-C(O)-R^{114}$,
 (f) $-C(O)-C_{1-6}$ alkyl- R^{115} , (g) $-OC(O)-R^{114}$, (h) $-OC(O)-C_{1-6}$ alkyl- R^{115} ,
 (i) $-OC(O)O-R^{114}$, (j) $-OC(O)O-C_{1-6}$ alkyl- R^{115} , (k) $-OC(O)NR^{114}R^{114}$,
 (l) $-OC(O)NR^{114}-C_{1-6}$ alkyl- R^{115} , (m) $-C(O)-C_{2-6}$ alkenyl- R^{115} , and
 (n) $-C(O)-C_{2-6}$ alkynyl- R^{115} ;

alternatively, R^{104} and R^{105} , taken together with the atoms to which they are bonded,

form:

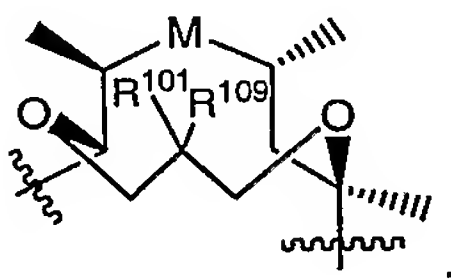


wherein

Q is CH or N, and R^{126} is $-OR^{114}$, $-NR^{114}$ or R^{114} ;

alternatively, R^{104} and R^{105} , taken together with the atoms to which they are bonded,

form:

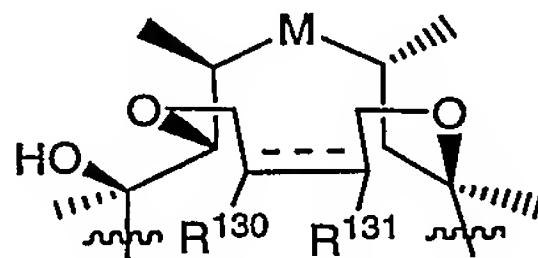


wherein

- i) R^{101} is as defined above;
 ii) alternately, R^{101} and R^{109} may be taken together form a carbonyl group;
 iii) alternately, R^{101} and R^{109} may be taken together to form the group $-O(CR^{116}R^{116})_uO-$;

alternatively, R^{104} and R^{105} , taken together with the atoms to which they are bonded,

form:



- i) R^{130} is $-OH$, $=C(O)$, or R^{114} ,

- 314 -

- 69 ii) R^{131} is $-\text{OH}$, $=\text{C}(\text{O})$, or R^{114} ,
 70 iii) alternately, R^{130} and R^{131} together with the carbons to which they
 71 are attached form a 3-7 membered saturated, unsaturated or
 72 aromatic carbocyclic or heterocyclic ring which can optionally be
 73 substituted with one or more R^{114} groups;

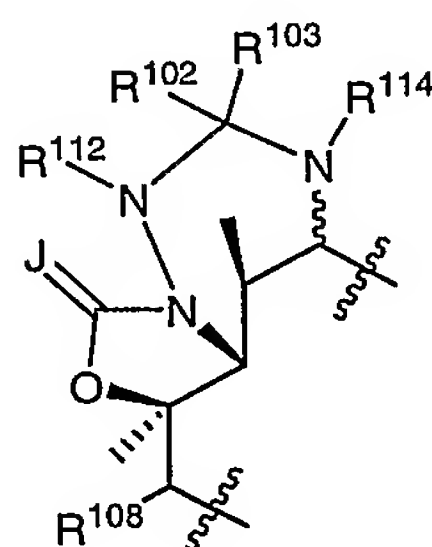
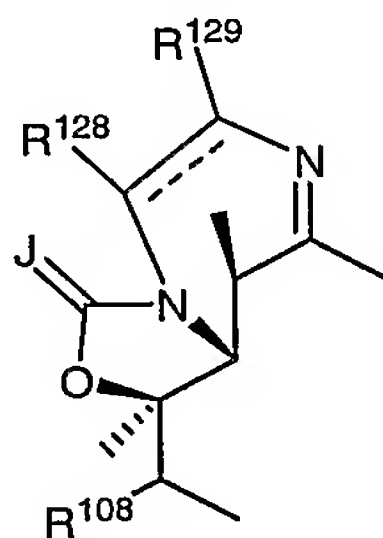
74
 75 R^{106} is selected from the group consisting of:

- 76 (a) $-\text{OR}^{114}$, (b) $-\text{C}_{1-6}$ alkoxy- R^{115} , (c) $-\text{C}(\text{O})R^{114}$, (d) $-\text{OC}(\text{O})R^{114}$, (e) $-\text{OC}(\text{O})\text{OR}^{114}$,
 77 (f) $-\text{OC}(\text{O})\text{NR}^{114}R^{114}$, and (g) $-\text{NR}^{114}R^{114}$,

78 alternatively, R^{105} and R^{106} taken together with the atoms to which they are attached form
 79 a 5-membered ring by attachment to each other through a chemical moiety selected from the
 80 group consisting of:

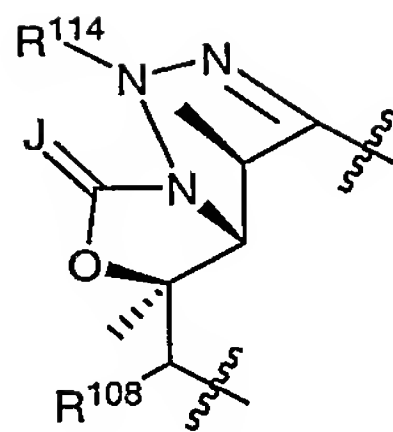
- 81 (a) $-\text{OC}(R^{115})_2\text{O}-$, (b) $-\text{OC}(\text{O})\text{O}-$, (c) $-\text{OC}(\text{O})\text{NR}^{114}-$, (d) $-\text{NR}^{114}\text{C}(\text{O})\text{O}-$,
 82 (e) $-\text{OC}(\text{O})\text{NOR}^{114}-$, (f) $-\text{NOR}^{114}-\text{C}(\text{O})\text{O}-$, (g) $-\text{OC}(\text{O})\text{NNR}^{114}R^{114}-$,
 83 (h) $-\text{NNR}^{114}R^{114}-\text{C}(\text{O})\text{O}-$, (i) $-\text{OC}(\text{O})\text{C}(R^{115})_2-$, (j) $-\text{C}(R^{115})_2\text{C}(\text{O})\text{O}-$, (k) $-\text{OC}(\text{S})\text{O}-$,
 84 (l) $-\text{OC}((\text{S})\text{NR}^{114})-$, (m) $-\text{NR}^{114}\text{C}(\text{S})\text{O}-$, (n) $-\text{OC}(\text{S})\text{NOR}^{114}-$, (o) $-\text{NOR}^{114}-\text{C}(\text{S})\text{O}-$,
 85 (p) $-\text{OC}(\text{S})\text{NNR}^{114}R^{114}-$, (q) $-\text{NNR}^{114}R^{114}-\text{C}(\text{S})\text{O}-$, (r) $-\text{OC}(\text{S})\text{C}(R^{115})_2-$, and (s) $-\text{C}(R^{115})_2\text{C}(\text{S})\text{O}-$;

86
 87 alternatively, M , R^{105} , and R^{106} taken together with the atoms to which they are attached form:



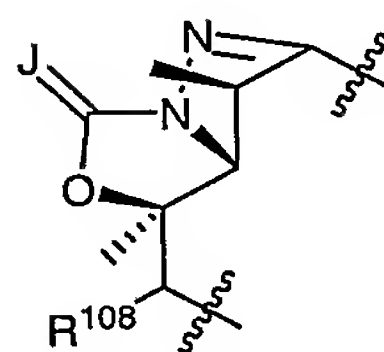
- 315 -

91



92

93

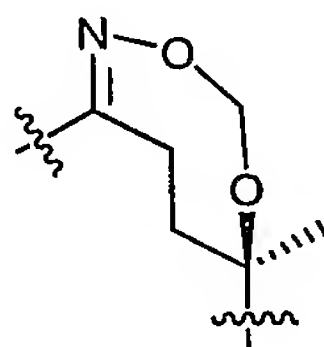


94

wherein J is selected from the group consisting of O, S and NR¹¹⁴;

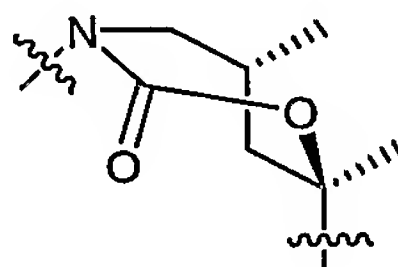
alternatively, M and R¹⁰⁴ taken together with the atoms to which they are attached form:

97



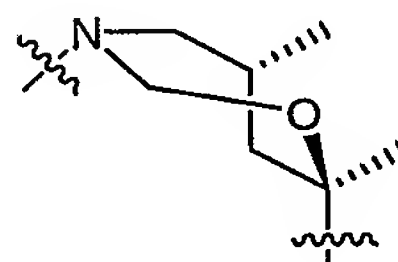
98

99



100

101



102

103

R¹⁰⁷ is selected from the group consisting of

- (a) H, (b) -C₁₋₄ alkyl, (c) -C₂₋₄ alkenyl, which can be further substituted with C₁₋₁₂ alkyl or one or more halogens, (d) -C₂₋₄ alkynyl, which can be further substituted with C₁₋₁₂ alkyl or one or more halogens, (e) aryl or heteroaryl, which can be further substituted with C₁₋₁₂ alkyl or one or more halogens, (f) -C(O)H, (g) -

105

106

107

108

- 316 -

109 COOH, (h) $-\text{CN}$, (i) $-\text{COOR}^{114}$, (j) $-\text{C(O)NR}^{114}\text{R}^{114}$, (k) $-\text{C(O)R}^{114}$, and (l) $-\text{C(O)SR}^{114}$, wherein (b) is further substituted with one or more substituents
 110
 111 selected from the group consisting of (aa) $-\text{OR}^{114}$, (bb) halogen, (cc) $-\text{SR}^{114}$, (dd)
 112 C_{1-12} alkyl, which can be further substituted with halogen, hydroxyl, C_{1-6} alkoxy,
 113 or amino, (ee) $-\text{OR}^{114}$, (ff) $-\text{SR}^{114}$, (gg) $-\text{NR}^{114}\text{R}^{114}$, (hh) $-\text{CN}$, (ii) $-\text{NO}_2$, (jj) $-\text{NC(O)R}^{114}$, (kk) $-\text{COOR}^{114}$, (ll) $-\text{N}_3$, (mm) $=\text{N-O-R}^{114}$, (nn) $=\text{NR}^{114}$, (oo) $=\text{N-}$
 114 $\text{NR}^{114}\text{R}^{114}$, (pp) $=\text{N-NH-C(O)R}^{114}$, and (qq) $=\text{N-NH-C(O)NR}^{114}\text{R}^{114}$,
 115
 116 alternatively R^{106} and R^{107} are taken together with the atom to which they are attached to
 117 form an epoxide, a carbonyl, an olefin, or a substituted olefin, or a $\text{C}_3\text{-C}_7$ carbocyclic, carbonate,
 118 or carbamate, wherein the nitrogen of said carbamate can be further substituted with a
 119 $\text{C}_1\text{-C}_6$ alkyl;

120 R^{108} is selected from the group consisting of:
 121 (a) C_{1-6} alkyl, (b) C_{2-6} alkenyl, and (c) C_{2-6} alkynyl,
 122 wherein any of (a)-(c) optionally is substituted with one or more R^{114}
 123 groups;

124 R^{111} is selected from the group consisting of H and $-\text{C(O)R}^{114}$;
 125 R^{112} is selected from the group consisting of H, OH, and OR^{114} ;

126 R^{113} is selected from the group consisting of:
 127 (a) H, (b) R^{114} , (c) $-\text{C}_{1-6}$ alkyl-K- R^{114} , (d) $-\text{C}_{2-6}$ alkenyl-K- R^{114} , and
 128 (e) $-\text{C}_{2-6}$ alkynyl-K- R^{114} ,
 129 wherein any of (c)-(e) optionally is substituted with one or more R^{115}
 130 groups;

131 R^{114} , at each occurrence, independently is selected from the group consisting of:
 132 (a) H, (b) C_{1-6} alkyl, (c) C_{2-6} alkenyl, (d) C_{2-6} alkynyl, (e) C_{6-10} saturated,
 133 unsaturated, or aromatic carbocycle, (f) 3-12 membered saturated, unsaturated, or
 134 aromatic heterocycle containing one or more heteroatoms selected from the group
 135 consisting of nitrogen, oxygen, and sulfur, (g) $-\text{C(O)-C}_{1-6}$ alkyl, (h) $-\text{C(O)-}$
 136 C_{2-6} alkenyl, (i) $-\text{C(O)-C}_{2-6}$ alkynyl, (j) $-\text{C(O)-C}_{6-10}$ saturated, unsaturated, or
 137 aromatic carbocycle, (k) $-\text{C(O)-3-12}$ membered saturated, unsaturated, or
 138 aromatic heterocycle containing one or more heteroatoms selected from the group
 139 consisting of nitrogen, oxygen, and sulfur, (l) $-\text{C(O)O-C}_{1-6}$ alkyl, (m) $-\text{C(O)O-}$
 140 C_{2-6} alkenyl, (n) $-\text{C(O)O-C}_{2-6}$ alkynyl, (o) $-\text{C(O)O-C}_{6-10}$ saturated, unsaturated,

- 317 -

141 or aromatic carbocycle, (p) $-\text{C}(\text{O})\text{O}-3-12$ membered saturated, unsaturated, or
 142 aromatic heterocycle containing one or more heteroatoms selected from the group
 143 consisting of nitrogen, oxygen, and sulfur, and (q) $-\text{C}(\text{O})\text{NR}^{116}\text{R}^{116}$,
 144 wherein any of (b)–(p) optionally is substituted with one or more R^{115}
 145 groups, wherein one or more non-terminal carbon moieties of any of (b)–
 146 (d) optionally is replaced with oxygen, $\text{S}(\text{O})_p$, or $-\text{NR}^{116}$,
 147 alternatively, $\text{NR}^{114}\text{R}^{114}$ forms a 3-7 membered saturated, unsaturated or aromatic ring
 148 including the nitrogen atom to which the R^{114} groups are bonded and optionally one or more
 149 moieties selected from the group consisting of O, $\text{S}(\text{O})_p$, N, and NR^{118} ;
 150 R^{115} is selected from the group consisting of:
 151 (a) R^{117} , (b) C_{1-8} alkyl, (c) C_{2-8} alkenyl, (d) C_{2-8} alkynyl, (e) C_{3-12} saturated,
 152 unsaturated, or aromatic carbocycle, (f) 3-12 membered saturated, unsaturated, or
 153 aromatic heterocycle containing one or more heteroatoms selected from the group
 154 consisting of nitrogen, oxygen, and sulfur,
 155 wherein any of (b)–(f) optionally is substituted with one or more R^{117}
 156 groups;
 157 R^{116} , at each occurrence, independently is selected from the group consisting of:
 158 (a) H, (b) C_{1-6} alkyl, (c) C_{2-6} alkenyl, (d) C_{2-6} alkynyl, (e) C_{3-10} saturated,
 159 unsaturated, or aromatic carbocycle, and (f) 3-10 membered saturated,
 160 unsaturated, or aromatic heterocycle containing one or more heteroatoms selected
 161 from the group consisting of nitrogen, oxygen, and sulfur,
 162 wherein one or more non-terminal carbon moieties of any of (b)–(d)
 163 optionally is replaced with oxygen, $\text{S}(\text{O})_p$, or $-\text{NR}^{114}$, wherein any of (b)–
 164 (f) optionally is substituted with one or more moieties selected from the
 165 group consisting of:
 166 (aa) carbonyl, (bb) formyl, (cc) F, (dd) Cl, (ee) Br, (ff) I, (gg) CN,
 167 (hh) N_3 , (ii) NO_2 , (jj) OR^{118} , (kk) $-\text{S}(\text{O})_p\text{R}^{118}$, (ll) $-\text{C}(\text{O})\text{R}^{118}$, (mm)
 168 $-\text{C}(\text{O})\text{OR}^{118}$, (nn) $-\text{OC}(\text{O})\text{R}^{118}$, (oo) $-\text{C}(\text{O})\text{NR}^{118}\text{R}^{118}$, (pp) $-\text{OC}(\text{O})\text{NR}^{118}\text{R}^{118}$, (qq) $-\text{C}(=\text{NR}^{118})\text{R}^{118}$, (rr) $-\text{C}(\text{R}^{118})(\text{R}^{118})\text{OR}^{118}$,
 169 (ss) $-\text{C}(\text{R}^{118})_2\text{OC}(\text{O})\text{R}^{118}$, (tt) $-\text{C}(\text{R}^{118})(\text{OR}^{118})(\text{CH}_2)_r\text{NR}^{118}\text{R}^{118}$,
 170 (uu) $-\text{NR}^{118}\text{R}^{118}$, (vv) $-\text{NR}^{118}\text{OR}^{118}$, (ww) $-\text{NR}^{118}\text{C}(\text{O})\text{R}^{118}$, (xx) $-\text{NR}^{118}\text{C}(\text{O})\text{OR}^{118}$, (yy) $-\text{NR}^{118}\text{C}(\text{O})\text{NR}^{118}\text{R}^{118}$, (zz) $-$

- 318 -

173 $\text{NR}^{118}\text{S}(\text{O})_r\text{R}^{118}$, (ab) $-\text{C}(\text{OR}^{118})(\text{OR}^{118})\text{R}^{118}$, (ac) $-\text{C}(\text{R}^{118})_2\text{NR}^{118}\text{R}^{118}$, (ad) $=\text{NR}^{118}$, (ae) $-\text{C}(\text{S})\text{NR}^{118}\text{R}^{118}$, (af) $-\text{NR}^{118}\text{C}(\text{S})\text{R}^{118}$, (ag) $-\text{OC}(\text{S})\text{NR}^{118}\text{R}^{118}$, (ah) $-\text{NR}^{118}\text{C}(\text{S})\text{OR}^{118}$, (ai) $-\text{NR}^{118}\text{C}(\text{S})\text{NR}^{118}\text{R}^{118}$, (aj) $-\text{SC}(\text{O})\text{R}^{118}$, (ak) C_{1-8} alkyl, (al) C_{2-8} alkenyl, (am) C_{2-8} alkynyl, (an) C_{1-8} alkoxy, (ao) C_{1-8} alkylthio, (ap) C_{1-8} acyl, (aq) saturated, unsaturated, or aromatic C_{3-10} carbocycle, and (ar) saturated, unsaturated, or aromatic 3-10 membered heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, alternatively, $\text{NR}^{116}\text{R}^{116}$ forms a 3-10 membered saturated, unsaturated or aromatic ring including the nitrogen atom to which the R^{116} groups are attached and optionally one or more moieties selected from the group consisting of O, $\text{S}(\text{O})_p$, N, and NR^{118} ; alternatively, $\text{CR}^{116}\text{R}^{116}$ forms a carbonyl group; R^{117} , at each occurrence, is selected from the group consisting of:

187 (a) H, (b) $=\text{O}$, (c) F, (d) Cl, (e) Br, (f) I, (g) $(\text{CR}^{116}\text{R}^{116})_r\text{CF}_3$, (h) $(\text{CR}^{116}\text{R}^{116})_r\text{CN}$,
 188 (i) $(\text{CR}^{116}\text{R}^{116})_r\text{NO}_2$, (j) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$, (k) $(\text{CR}^{116}\text{R}^{116})_r\text{OR}^{119}$,
 189 (l) $(\text{CR}^{116}\text{R}^{116})_r\text{S}(\text{O})_p(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$, (m) $(\text{CR}^{116}\text{R}^{116})_r\text{C}(\text{O})(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 190 (n) $(\text{CR}^{116}\text{R}^{116})_r\text{OC}(\text{O})(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$, (o) $(\text{CR}^{116}\text{R}^{116})_r\text{SC}(\text{O})(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 191 (p) $(\text{CR}^{116}\text{R}^{116})_r\text{C}(\text{O})\text{O}(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$, (q) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{C}(\text{O})(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$, (r) $(\text{CR}^{116}\text{R}^{116})_r\text{C}(\text{O})\text{NR}^{116}(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$, (s) $(\text{CR}^{116}\text{R}^{116})_r\text{C}(=\text{NR}^{116})(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 194 (t) $(\text{CR}^{116}\text{R}^{116})_r\text{C}(=\text{NNR}^{116}\text{R}^{116})(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 195 (u) $(\text{CR}^{116}\text{R}^{116})_r\text{C}(=\text{NNR}^{116}\text{C}(\text{O})\text{R}^{116})(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 196 (v) $(\text{CR}^{116}\text{R}^{116})_r\text{C}(=\text{NOR}^{119})(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 197 (w) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{C}(\text{O})\text{O}(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 198 (x) $(\text{CR}^{116}\text{R}^{116})_r\text{OC}(\text{O})\text{NR}^{116}(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 199 (y) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{C}(\text{O})\text{NR}^{116}(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 200 (z) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{S}(\text{O})_p(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 201 (aa) $(\text{CR}^{116}\text{R}^{116})_r\text{S}(\text{O})_p\text{NR}^{116}(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$,
 202 (bb) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{S}(\text{O})_p\text{NR}^{116}(\text{CR}^{116}\text{R}^{116})_t\text{R}^{119}$, (cc) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{R}^{116}$,
 203 (dd) C_{1-6} alkyl, (ee) C_{2-6} alkenyl, (ff) C_{2-6} alkynyl, (gg) $(\text{CR}^{116}\text{R}^{116})_r-\text{C}_{3-10}$ saturated, unsaturated, or aromatic carbocycle, and (hh) $(\text{CR}^{116}\text{R}^{116})_r-3-10$

- 319 -

205 membered saturated, unsaturated, or aromatic heterocycle containing one or more
 206 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
 207 wherein any of (dd)–(hh) optionally is substituted with one or more R¹¹⁹
 208 groups;
 209 alternatively, two R¹¹⁷ groups may form –O(CH₂)_uO–;
 210 R¹¹⁸ is selected from the group consisting of:
 211 (a) H, (b) C₁₋₆ alkyl, (c) C₂₋₆ alkenyl, (d) C₂₋₆ alkynyl, (e) C₃₋₁₀ saturated,
 212 unsaturated, or aromatic carbocycle, (f) 3-10 membered saturated, unsaturated, or
 213 aromatic heterocycle containing one or more heteroatoms selected from the group
 214 consisting of nitrogen, oxygen, and sulfur, (g) –C(O)–C₁₋₆ alkyl, (h) –C(O)–
 215 C₁₋₆ alkenyl, (g) –C(O)–C₁₋₆ alkynyl, (i) –C(O)–C₃₋₁₀ saturated, unsaturated, or
 216 aromatic carbocycle, and (j) –C(O)–3-10 membered saturated, unsaturated, or
 217 aromatic heterocycle containing one or more heteroatoms selected from the group
 218 consisting of nitrogen, oxygen, and sulfur,
 219 wherein any of (b)–(j) optionally is substituted with one or more moieties
 220 selected from the group consisting of : (aa) H, (bb) F, (cc) Cl, (dd) Br, (ee)
 221 I, (ff) CN, (gg) NO₂, (hh) OH, (ii) NH₂, (jj) NH(C₁₋₆ alkyl), (kk)
 222 N(C₁₋₆ alkyl)₂, (ll) C₁₋₆ alkoxy, (mm) aryl, (nn) substituted aryl, (oo)
 223 heteroaryl, (pp) substituted heteroaryl, and (qq) C₁₋₆ alkyl, optionally
 224 substituted with one or more moieties selected from the group consisting
 225 of aryl, substituted aryl, heteroaryl, substituted heteroaryl, F, Cl, Br, I, CN,
 226 NO₂, and OH;
 227 R¹¹⁹, at each occurrence, independently is selected from the group consisting of:
 228 (a) R¹²⁰, (b) C₁₋₆ alkyl, (c) C₂₋₆ alkenyl, (d) C₂₋₆ alkynyl, (e) C₃₋₁₀ saturated,
 229 unsaturated, or aromatic carbocycle, and (f) 3-10 membered saturated,
 230 unsaturated, or aromatic heterocycle containing one or more heteroatoms selected
 231 from the group consisting of nitrogen, oxygen, and sulfur,
 232 wherein any of (b)–(f) optionally is substituted with one or more R¹¹⁹
 233 groups;
 234 R¹²⁰, at each occurrence, independently is selected from the group consisting of:

- 320 -

- 235 (a) H, (b) =O, (c) F, (d) Cl, (e) Br, (f) I, (g) $(\text{CR}^{116}\text{R}^{116})_r\text{CF}_3$, (h) $(\text{CR}^{116}\text{R}^{116})_r\text{CN}$,
 236 (i) $(\text{CR}^{116}\text{R}^{116})_r\text{NO}_2$, (j) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{R}^{116}$, (k) $(\text{CR}^{116}\text{R}^{116})_r\text{OR}^{114}$,
 237 (l) $(\text{CR}^{116}\text{R}^{116})_r\text{S(O)}_p\text{R}^{116}$, (m) $(\text{CR}^{116}\text{R}^{116})_r\text{C(O)}\text{R}^{116}$, (n) $(\text{CR}^{116}\text{R}^{116})_r\text{C(O)}\text{OR}^{116}$,
 238 (o) $(\text{CR}^{116}\text{R}^{116})_r\text{OC(O)}\text{R}^{116}$, (p) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{C(O)}\text{R}^{116}$,
 239 (q) $(\text{CR}^{116}\text{R}^{116})_r\text{C(O)}\text{NR}^{116}\text{R}^{116}$, (r) $(\text{CR}^{116}\text{R}^{116})_r\text{C(=NR}^{116})\text{R}^{116}$,
 240 (s) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{C(O)}\text{NR}^{116}\text{R}^{116}$, (t) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{S(O)}_p\text{R}^{116}$,
 241 (u) $(\text{CR}^{116}\text{R}^{116})_r\text{S(O)}_p\text{NR}^{116}\text{R}^{116}$, (v) $(\text{CR}^{116}\text{R}^{116})_r\text{NR}^{116}\text{S(O)}_p\text{NR}^{116}\text{R}^{116}$,
 242 (w) C_{1-6} alkyl, (x) C_{2-6} alkenyl, (y) C_{2-6} alkynyl, (z) $(\text{CR}^{116}\text{R}^{116})_r\text{C}_{3-10}$ saturated,
 243 unsaturated, or aromatic carbocycle, and (aa) $(\text{CR}^{116}\text{R}^{116})_r\text{3-10}$ membered
 244 saturated, unsaturated, or aromatic heterocycle containing one or more
 245 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
 246 wherein any of (w)–(aa) optionally is substituted with one or more
 247 moieties selected from the group consisting of R^{116} , F, Cl, Br, I, CN, NO_2 ,
 248 $-\text{OR}^{116}$, $-\text{NH}_2$, $-\text{NH}(\text{C}_{1-6} \text{ alkyl})$, $-\text{N}(\text{C}_{1-6} \text{ alkyl})_2$, C_{1-6} alkoxy,
 249 C_{1-6} alkylthio, and C_{1-6} acyl;
- 250 R^{121} , at each occurrence, independently is selected from the group consisting of:
- 251 (a) H, (b) $-\text{OR}^{118}$, (c) $-\text{O}-\text{C}_{1-6} \text{ alkyl}-\text{OC(O)}\text{R}^{118}$, (d) $-\text{O}-\text{C}_{1-6} \text{ alkyl}-\text{OC(O)}\text{OR}^{118}$,
 252 (e) $-\text{O}-\text{C}_{1-6} \text{ alkyl}-\text{OC(O)}\text{NR}^{118}\text{R}^{118}$, (f) $-\text{O}-\text{C}_{1-6} \text{ alkyl}-\text{C(O)}\text{NR}^{118}\text{R}^{118}$, (g) $-\text{O}-$
 253 $\text{C}_{1-6} \text{ alkyl}-\text{NR}^{118}\text{C(O)}\text{R}^{118}$, (h) $-\text{O}-\text{C}_{1-6} \text{ alkyl}-\text{NR}^{118}\text{C(O)}\text{OR}^{118}$, (i) $-\text{O}-\text{C}_{1-6} \text{ alkyl}-$
 254 $\text{NR}^{118}\text{C(O)}\text{NR}^{118}\text{R}^{118}$, (j) $-\text{O}-\text{C}_{1-6} \text{ alkyl}-\text{NR}^{118}\text{C(=N(H))NR}^{118}\text{R}^{118}$, (k) $-\text{O}-$
 255 $\text{C}_{1-6} \text{ alkyl}-\text{S(O)}_p\text{R}^{118}$, (l) $-\text{O}-\text{C}_{2-6} \text{ alkenyl}-\text{OC(O)}\text{R}^{118}$, (m) $-\text{O}-\text{C}_{2-6} \text{ alkenyl}-$
 256 $\text{OC(O)}\text{OR}^{118}$, (n) $-\text{O}-\text{C}_{2-6} \text{ alkenyl}-\text{OC(O)}\text{NR}^{118}\text{R}^{118}$, (o) $-\text{O}-\text{C}_{2-6} \text{ alkenyl}-$
 257 $\text{C(O)}\text{NR}^{118}\text{R}^{118}$, (p) $-\text{O}-\text{C}_{2-6} \text{ alkenyl}-\text{NR}^{118}\text{C(O)}\text{R}^{118}$, (q) $-\text{O}-\text{C}_{2-6} \text{ alkenyl}-$
 258 $\text{NR}^{118}\text{C(O)}\text{OR}^{118}$, (r) $-\text{O}-\text{C}_{2-6} \text{ alkenyl}-\text{NR}^{118}\text{C(O)}\text{NR}^{118}\text{R}^{118}$, (s) $-\text{O}-\text{C}_{2-6} \text{ alkenyl}-$
 259 $\text{NR}^{118}\text{C(=N(H))NR}^{118}\text{R}^{118}$, (t) $-\text{O}-\text{C}_{2-6} \text{ alkenyl}-\text{S(O)}_p\text{R}^{118}$,
 260 (u) $-\text{O}-\text{C}_{2-6} \text{ alkynyl}-\text{OC(O)}\text{R}^{118}$, (v) $-\text{O}-\text{C}_{2-6} \text{ alkynyl}-\text{OC(O)}\text{OR}^{118}$,
 261 (w) $-\text{O}-\text{C}_{2-6} \text{ alkynyl}-\text{OC(O)}\text{NR}^{118}\text{R}^{118}$, (x) $-\text{O}-\text{C}_{2-6} \text{ alkynyl}-\text{C(O)}\text{NR}^{118}\text{R}^{118}$, (y) $-\text{O}-$
 262 $\text{C}_{2-6} \text{ alkynyl}-\text{NR}^{118}\text{C(O)}\text{R}^{118}$, (z) $-\text{O}-\text{C}_{2-6} \text{ alkynyl}-\text{NR}^{118}\text{C(O)}\text{OR}^{118}$, (aa) $-\text{O}-$
 263 $\text{C}_{2-6} \text{ alkynyl}-\text{NR}^{118}\text{C(O)}\text{NR}^{118}\text{R}^{118}$,
 264 (bb) $-\text{O}-\text{C}_{2-6} \text{ alkynyl}-\text{NR}^{118}\text{C(=N(H))NR}^{118}\text{R}^{118}$, (cc) $-\text{O}-\text{C}_{2-6} \text{ alkynyl}-\text{S(O)}_p\text{R}^{118}$;
 265 and (dd) $-\text{NR}^{118}\text{R}^{118}$;

- 321 -

266 alternatively, two R^{121} groups taken together form $=O$, $=NOR^{118}$, or $=NNR^{118}R^{118}$,
 267 R^{122} is R^{115} ;

268 R^{123} is selected from the group consisting of:

269 (a) R^{116} , (b) F, (c) Cl, (d) Br, (e) I, (f) CN, (g) NO_2 , and (h) $-OR^{114}$;

270 alternatively, R^{122} and R^{123} taken together are $-O(CH_2)_uO-$;

271 R^{124} , at each occurrence, independently is selected from the group consisting of:

272 (a) H, (b) F, (c) Cl, (d) Br, (e) I, (f) CN, (g) $-OR^{114}$, (h) $-NO_2$, (i) $-NR^{114}R^{114}$, (j)
 273 C_{1-6} alkyl, (k) C_{1-6} acyl, and (l) C_{1-6} alkoxy;

274 R^{125} is selected from the group consisting of:

275 (a) C_{1-6} alkyl, (b) C_{2-6} alkenyl, (c) C_{2-6} alkynyl, (d) C_{1-6} acyl, (e) C_{1-6} alkoxy,
 276 (f) C_{1-6} alkylthio, (g) saturated, unsaturated, or aromatic C_{5-10} carbocycle,
 277 (h) saturated, unsaturated, or aromatic 5-10 membered heterocycle containing one
 278 or more heteroatoms selected from the group consisting of nitrogen, oxygen, and
 279 sulfur, (i) $-O-C_{1-6}$ alkyl-saturated, unsaturated, or aromatic 5-10 membered
 280 heterocycle containing one or more heteroatoms selected from the group
 281 consisting of nitrogen, oxygen, and sulfur, (j) $-NR^{114}-C_{1-6}$ alkyl-saturated,
 282 unsaturated, or aromatic 5-10 membered heterocycle containing one or more
 283 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
 284 (k) saturated, unsaturated, or aromatic 10-membered bicyclic ring system
 285 optionally containing one or more heteroatoms selected from the group consisting
 286 of nitrogen, oxygen, and sulfur, (l) saturated, unsaturated, or aromatic 13-
 287 membered tricyclic ring system optionally containing one or more heteroatoms
 288 selected from the group consisting of nitrogen, oxygen, and sulfur, (m) $-OR^{114}$,
 289 (n) $-NR^{114}R^{114}$, (o) $-S(O)_pR^{114}$, and (p) $-R^{124}$,

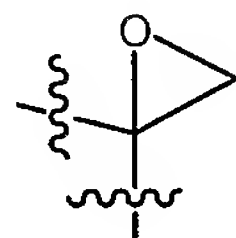
290 wherein any of (a)-(l) optionally is substituted with one or more R^{115}
 291 groups;

292 alternatively, R^{125} and one R^{124} group, taken together with the atoms to which they are
 293 bonded, form a 5-7 membered saturated or unsaturated carbocycle, optionally substituted with
 294 one or more R^{115} groups; or a 5-7 membered saturated or unsaturated heterocycle containing one
 295 or more atoms selected from the group consisting of nitrogen, oxygen, and sulfur, and optionally
 296 substituted with one or more R^{115} groups;

297 R^{126} at each occurrence, independently is selected from the group consisting of:

- 322 -

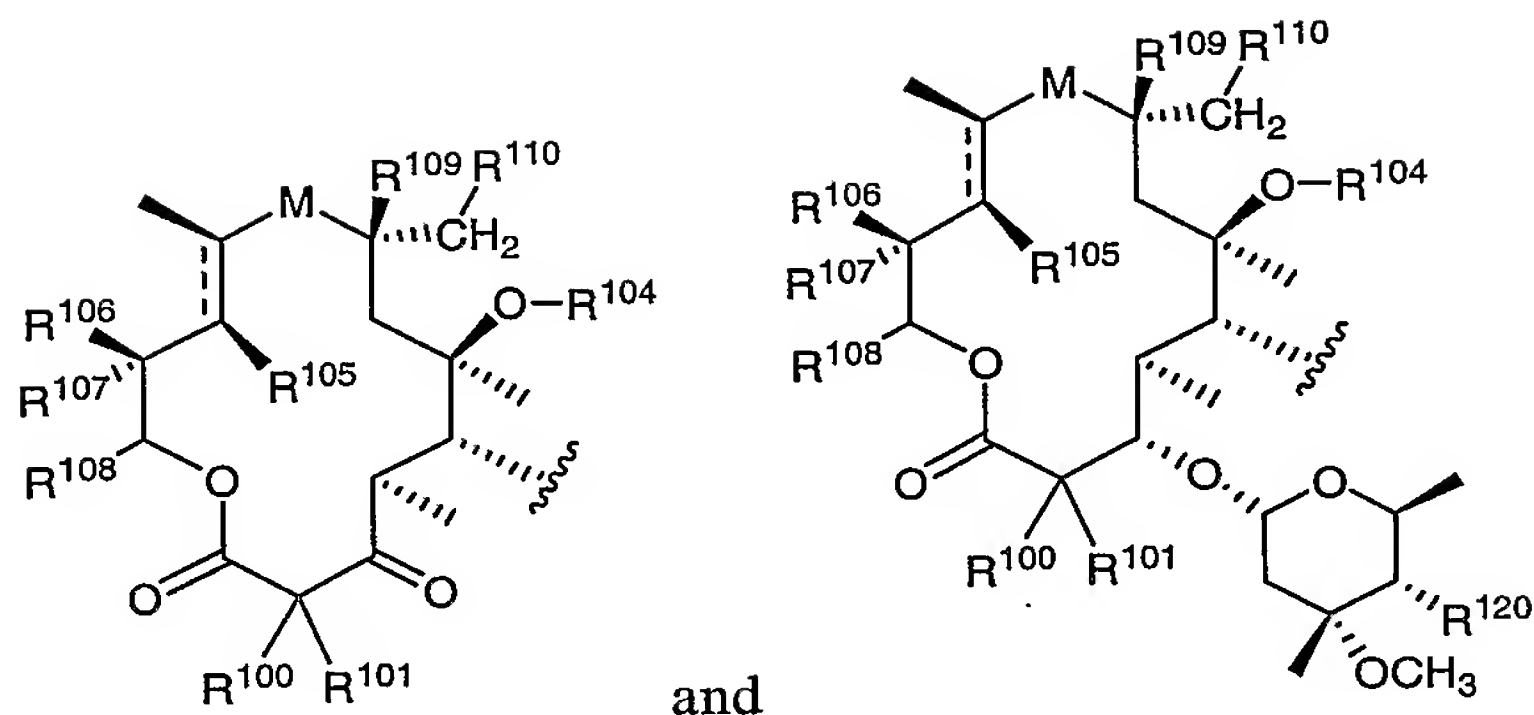
298 (a) hydrogen, (b) an electron-withdrawing group, (c) aryl, (d) substituted aryl,
 299 (e) heteroaryl, (f) substituted heteroaryl, and (g) C₁₋₆ alkyl, optionally substituted
 300 with one or more R¹¹⁵ groups;
 301 alternatively, any R¹²⁶ and any R¹²³, taken together with the atoms to which they are
 302 bonded, form a 5-7 membered saturated or unsaturated carbocycle, optionally substituted with
 303 one or more R¹¹⁵ groups; or a 5-7 membered saturated or unsaturated heterocycle containing one
 304 or more atoms selected from the group consisting of nitrogen, oxygen, and sulfur, and optionally
 305 substituted with one or more R¹¹⁵ groups;
 306 R¹⁰⁹ is H or F;
 307 R¹²⁷ is R¹¹⁴, a monosaccharide or disaccharide (including amino sugars and halo sugar(s),
 308 $-(CH_2)_n-(O-CH_2CH_2-)_m-O(CH_2)_pCH_3$ or $-(CH_2)_n-(O-CH_2CH_2-)_m-OH$
 309 R¹²⁸ is R¹¹⁴
 310 R¹²⁹ is R¹¹⁴
 311 R¹¹⁰ is R¹¹⁴
 312 Alternatively, R¹⁰⁹ and R¹¹⁰ taken together with the carbons to which they are attached
 313 form:



314
 315 Alternately, R¹²⁸ and R¹²⁹ together with the carbons to which they are attached form a 3-6
 316 membered saturated, unsaturated or aromatic carbocyclic or heterocyclic ring which may
 317 optionally be substituted with one or more R¹¹⁴ groups;
 318
 319 m, at each occurrence is 0, 1, 2, 3, 4, or 5;
 320 n, at each occurrence is 1, 2, or 3.

1 14. A compound according to any one of claims 1-13, wherein T is a macrolide
 2 selected from the group consisting of:

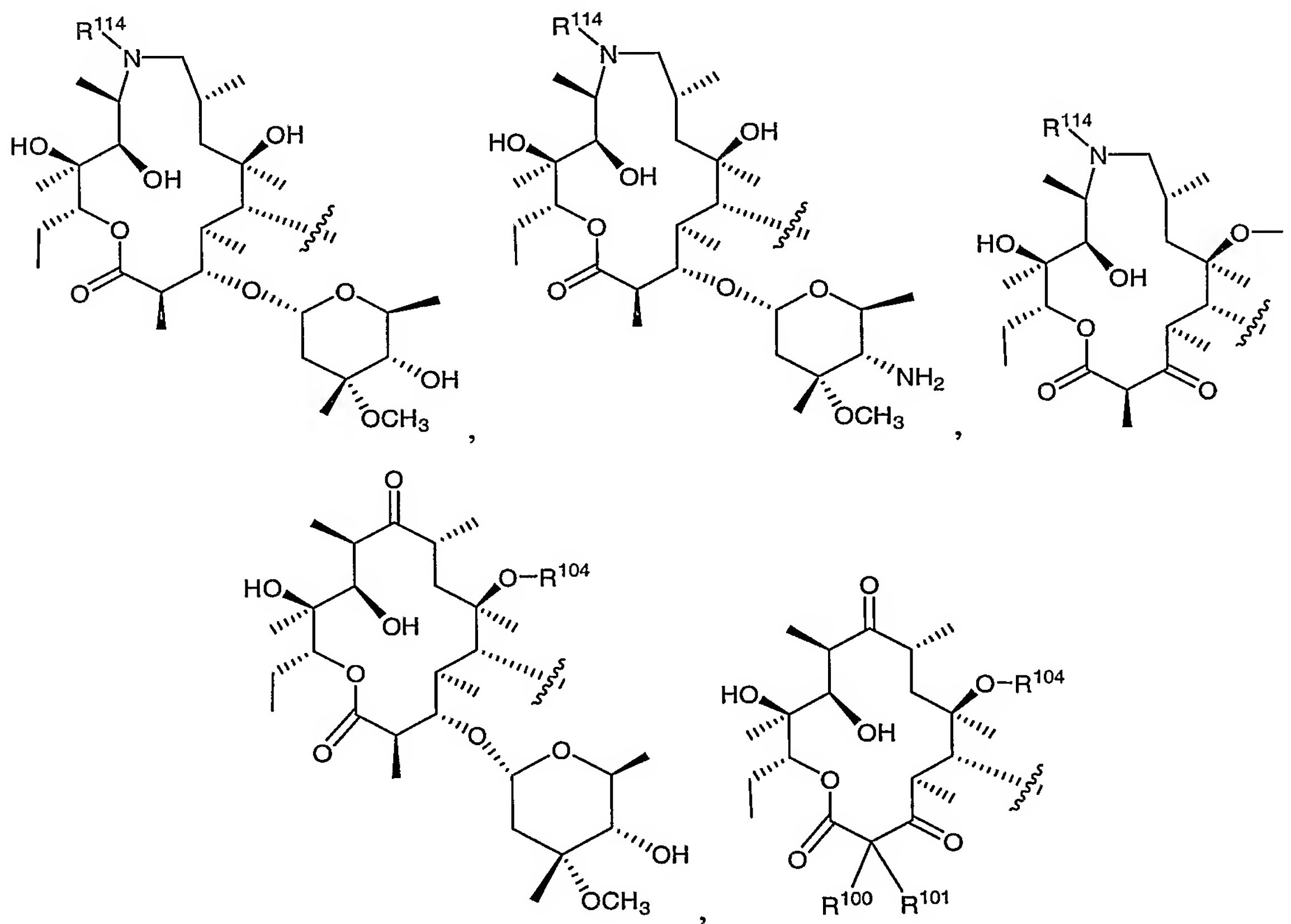
- 323 -



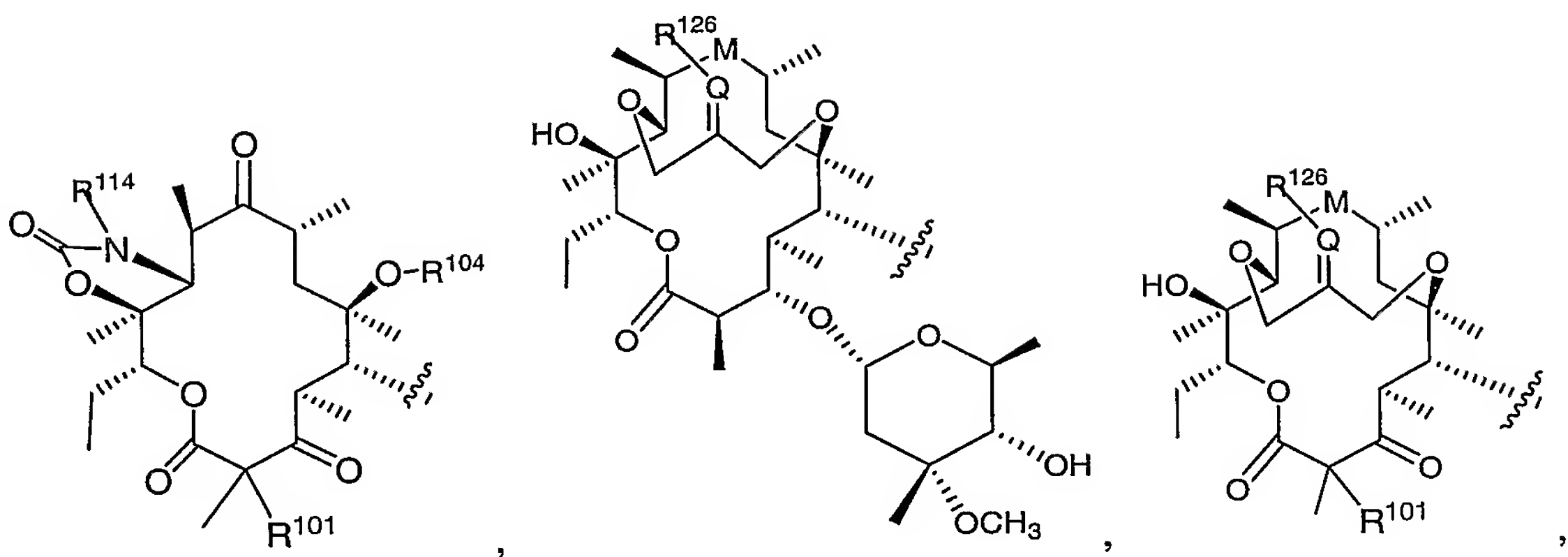
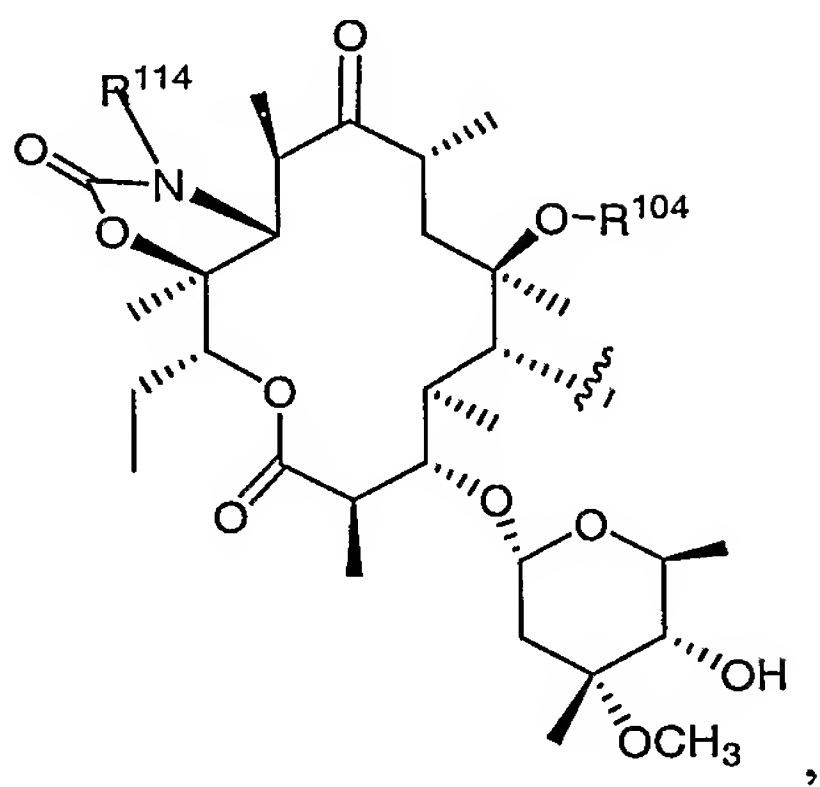
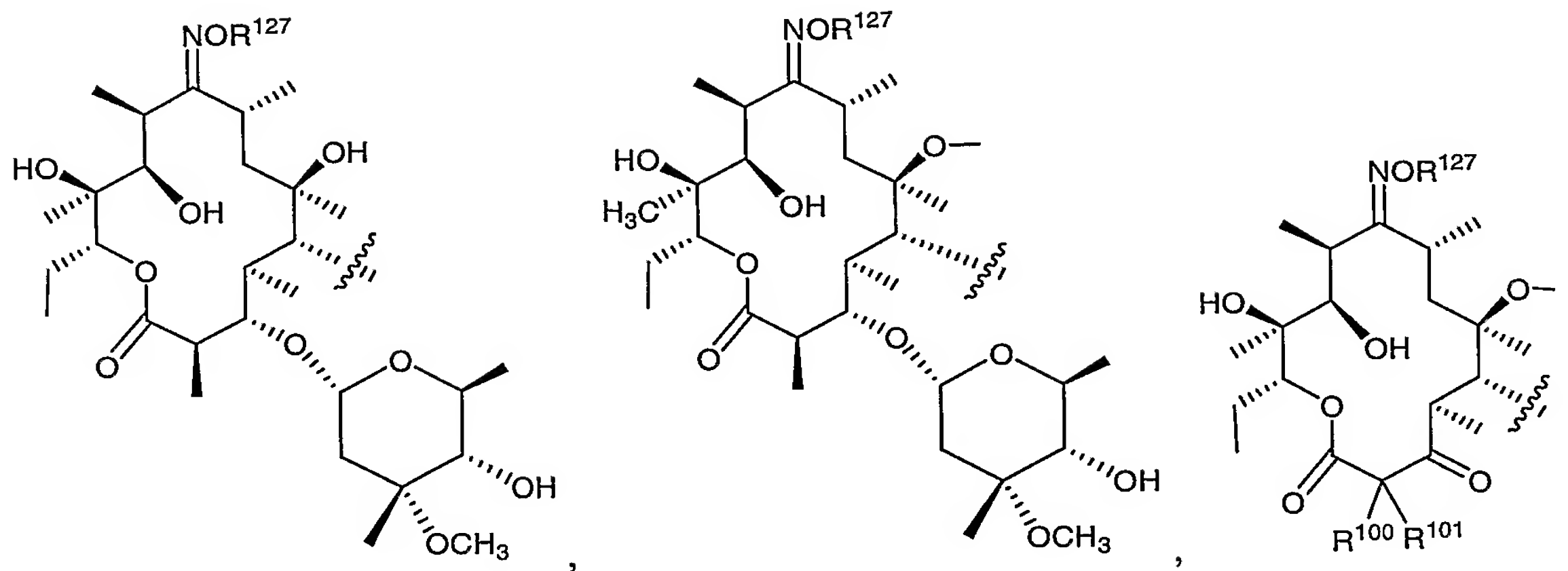
and

or an *N*-oxide pharmaceutically acceptable salt, ester, or prodrug thereof, wherein M, R¹⁰⁰, R¹⁰¹, R¹⁰⁴, R¹⁰⁵, R¹⁰⁶, R¹⁰⁷, R¹⁰⁸, R¹⁰⁹, R¹¹⁰, and R¹²⁰ are as described in claim 13.

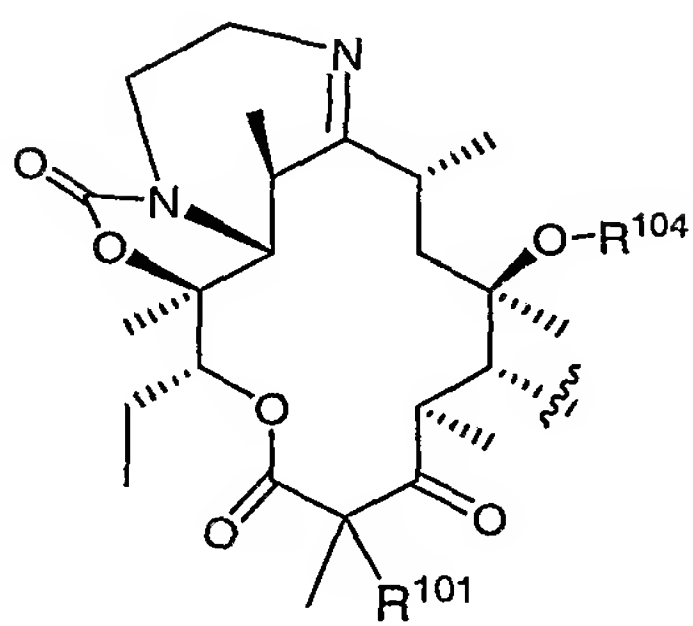
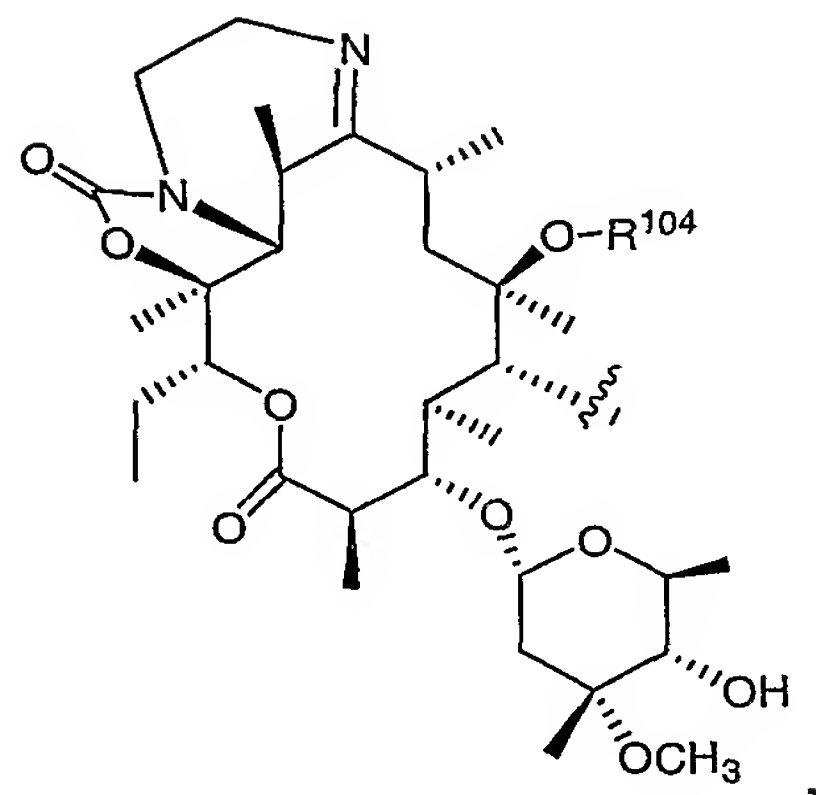
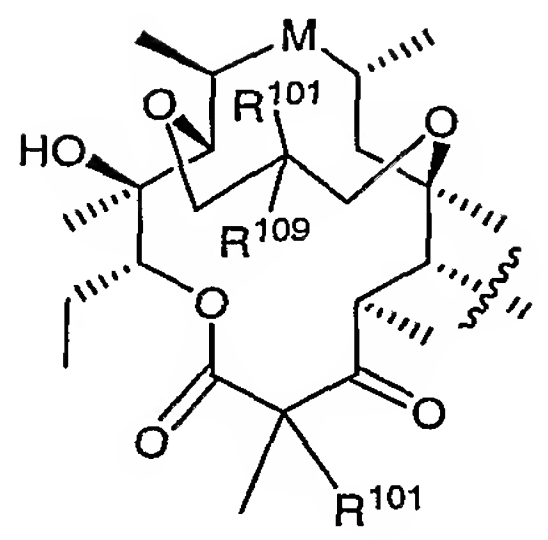
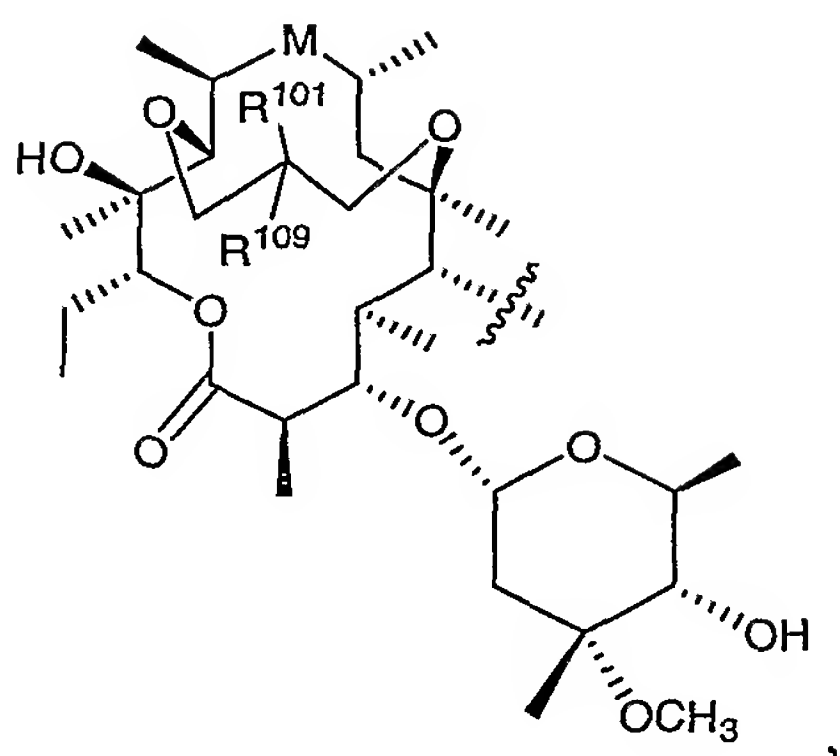
15. A compound according to any one of claims 1-14, wherein T is a macrolide selected from the group consisting of:



- 324 -



- 325 -

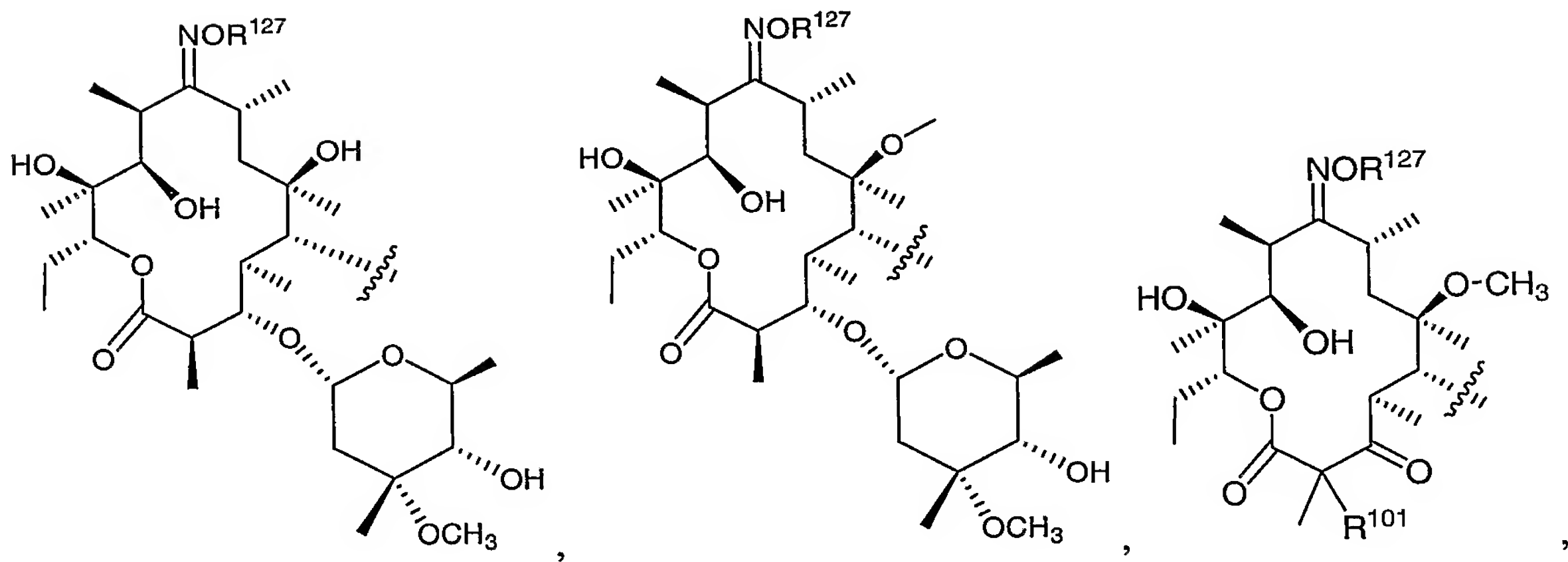
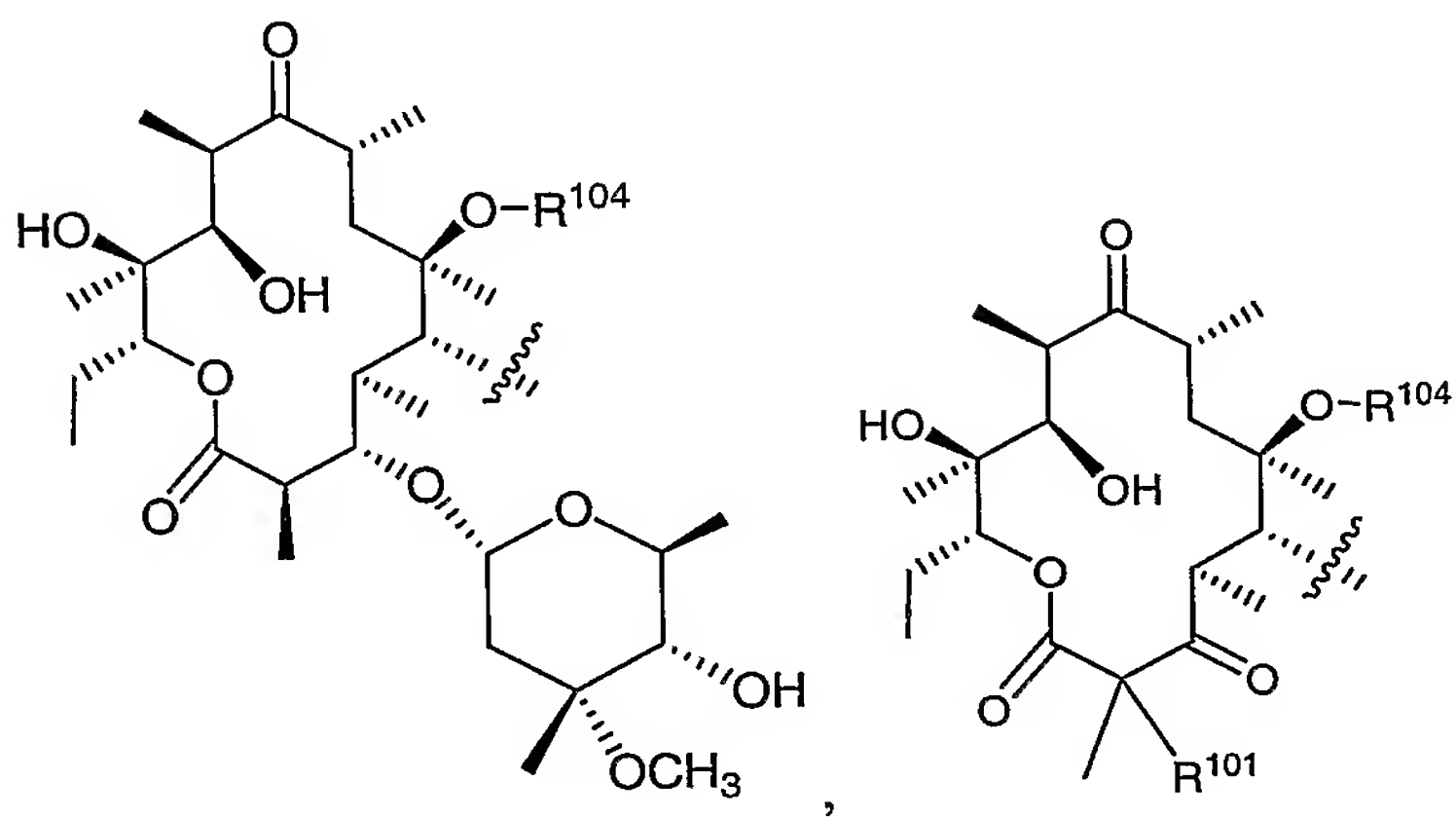
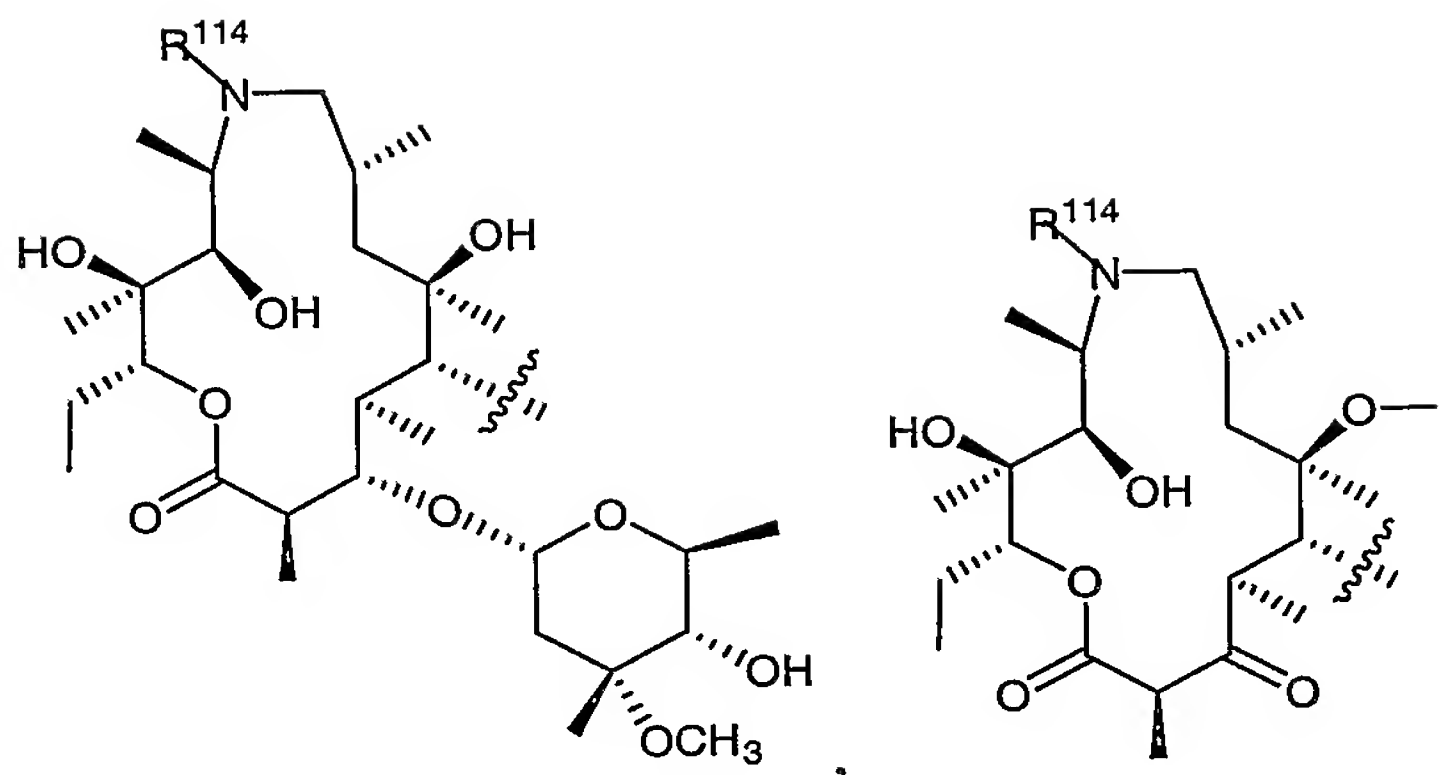


or an *N*-oxide pharmaceutically acceptable salt, ester, or prodrug thereof,

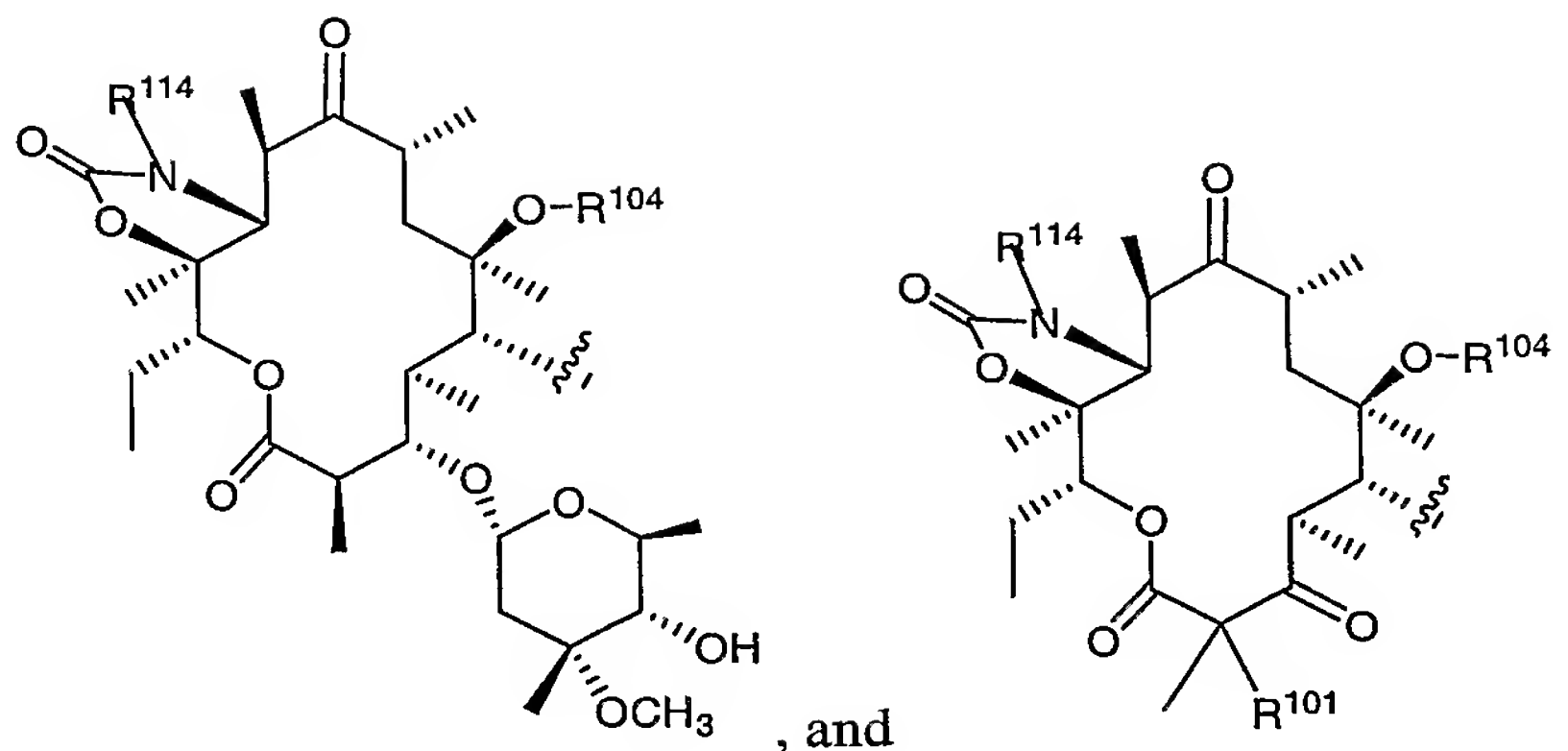
wherein M , R^{100} , R^{101} , R^{102} , R^{104} , R^{109} , R^{114} , R^{126} and R^{127} are as described in claim 13.

16. A compound according to any one of claims 1-15, wherein T is a macrolide selected from the group consisting of:

- 326 -

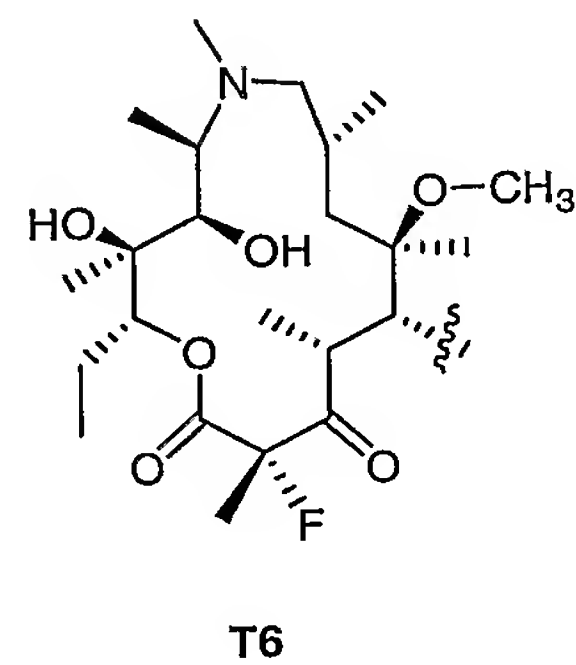
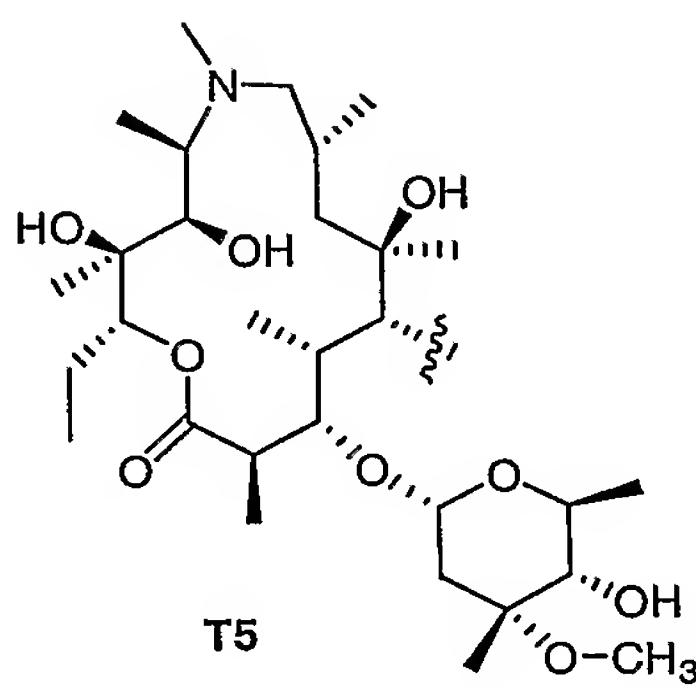
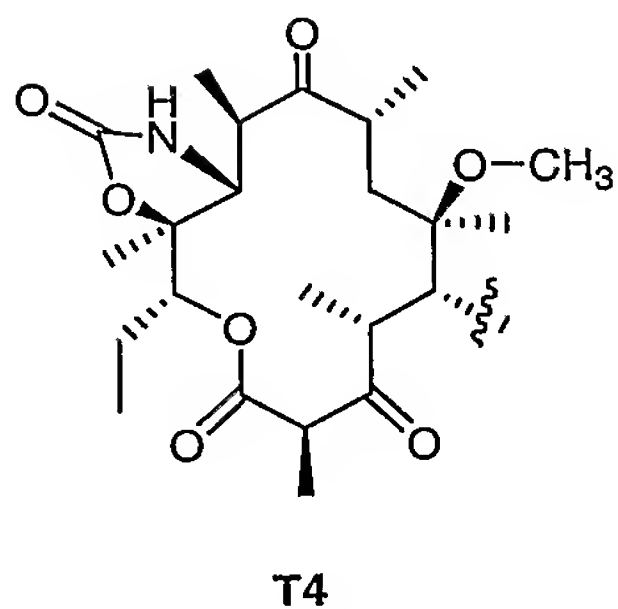
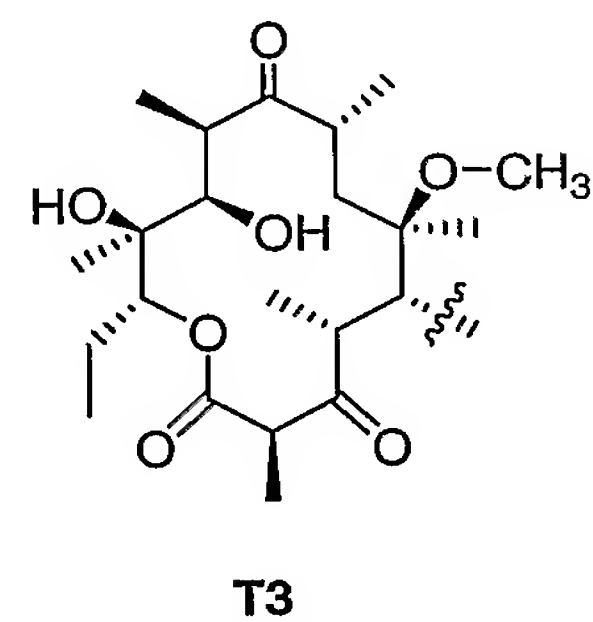
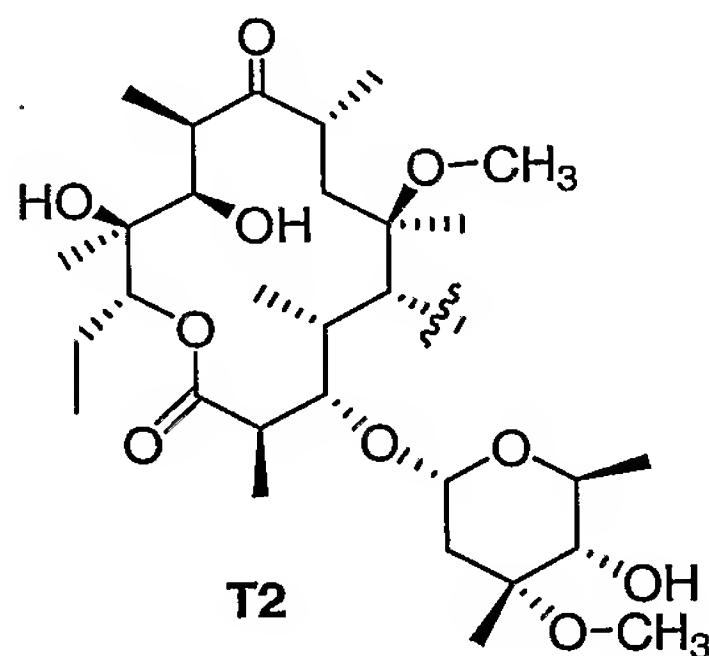
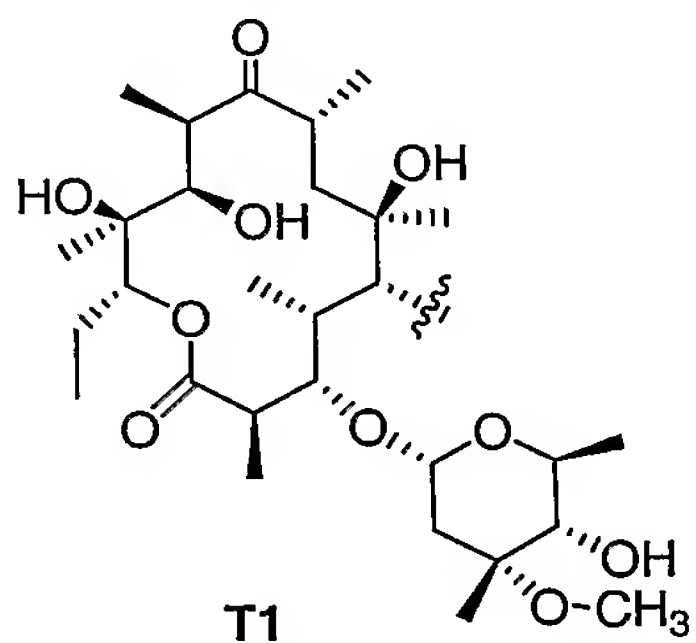


- 327 -

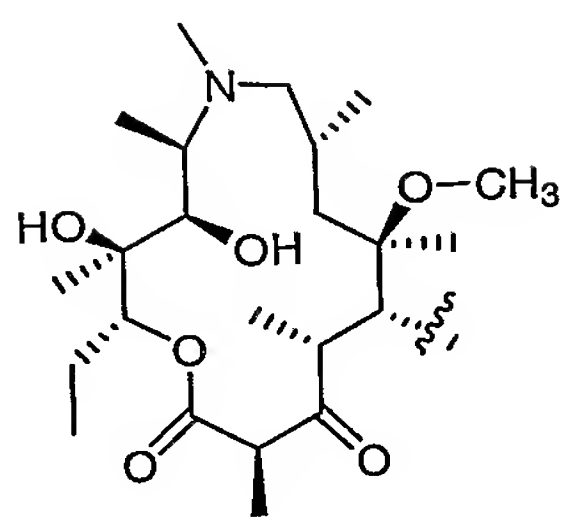


or an *N*-oxide pharmaceutically acceptable salt, ester, or prodrug thereof,
wherein M, R¹, R², R¹⁰⁴, R¹¹⁴, R¹⁰⁹ and R¹²⁷ are as described in claim 13.

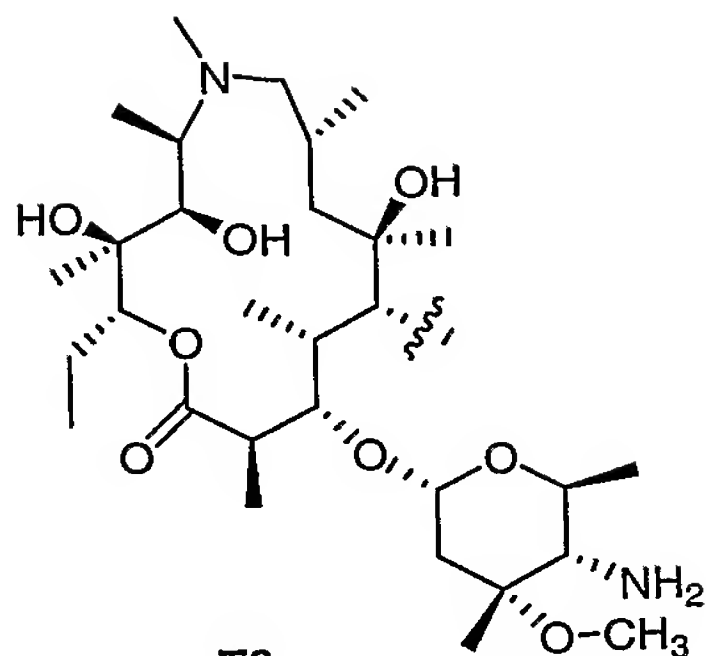
17. A compound according to any one of claims 1-16, wherein T is a macrolide
selected from the group consisting of T1 through T33:



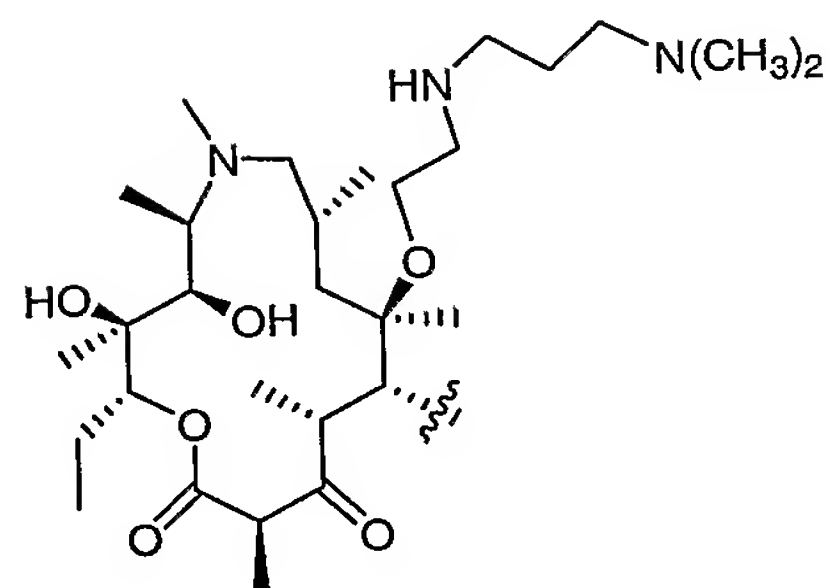
- 328 -



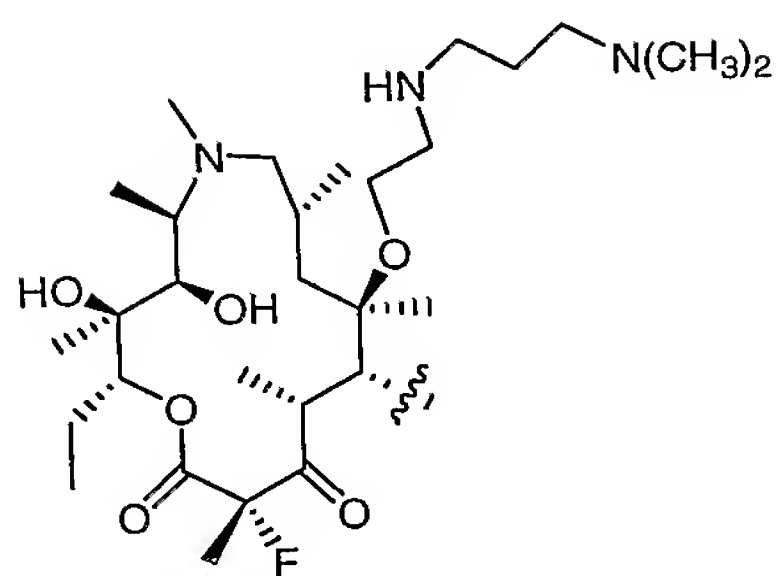
T7



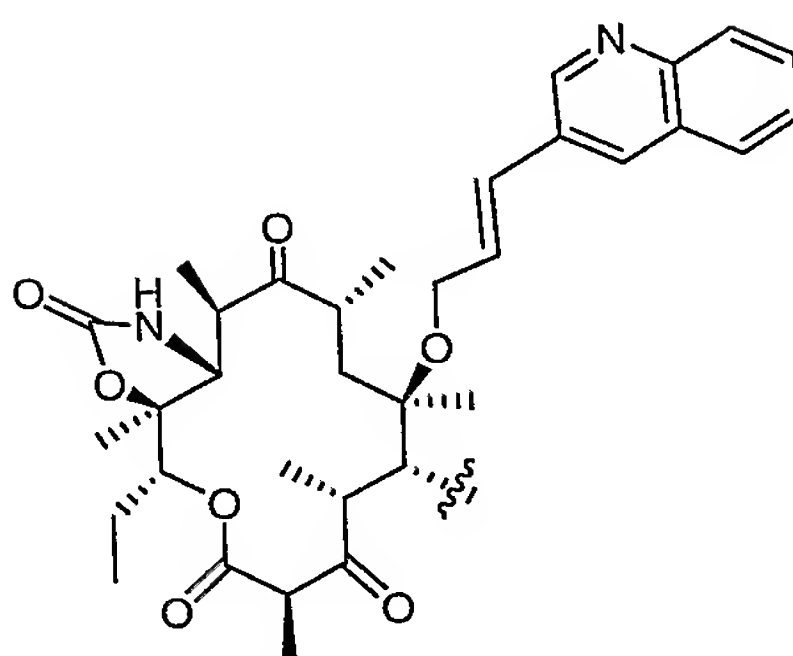
T8



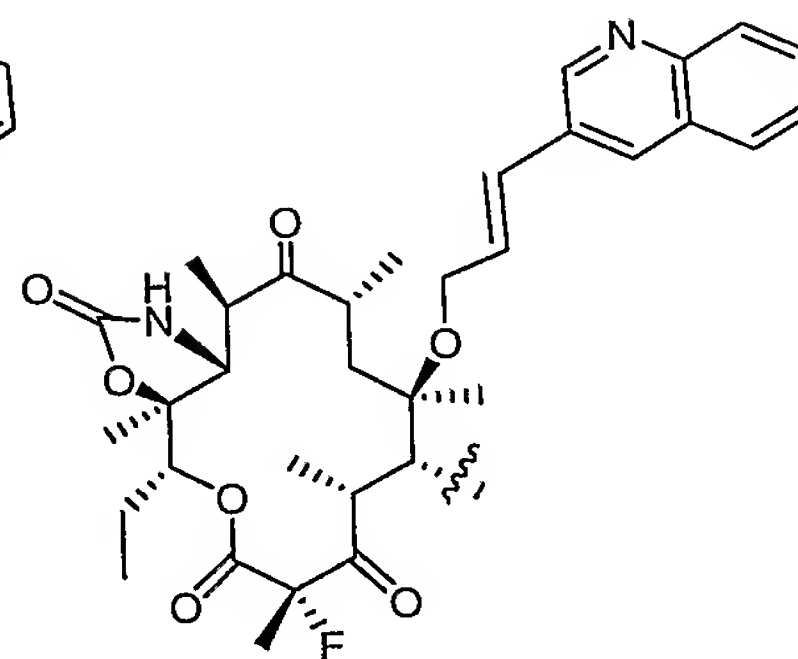
T9



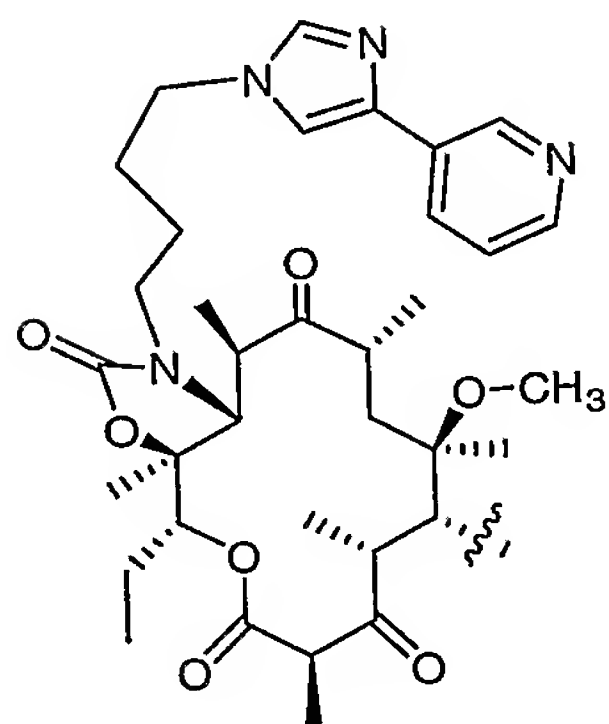
T10



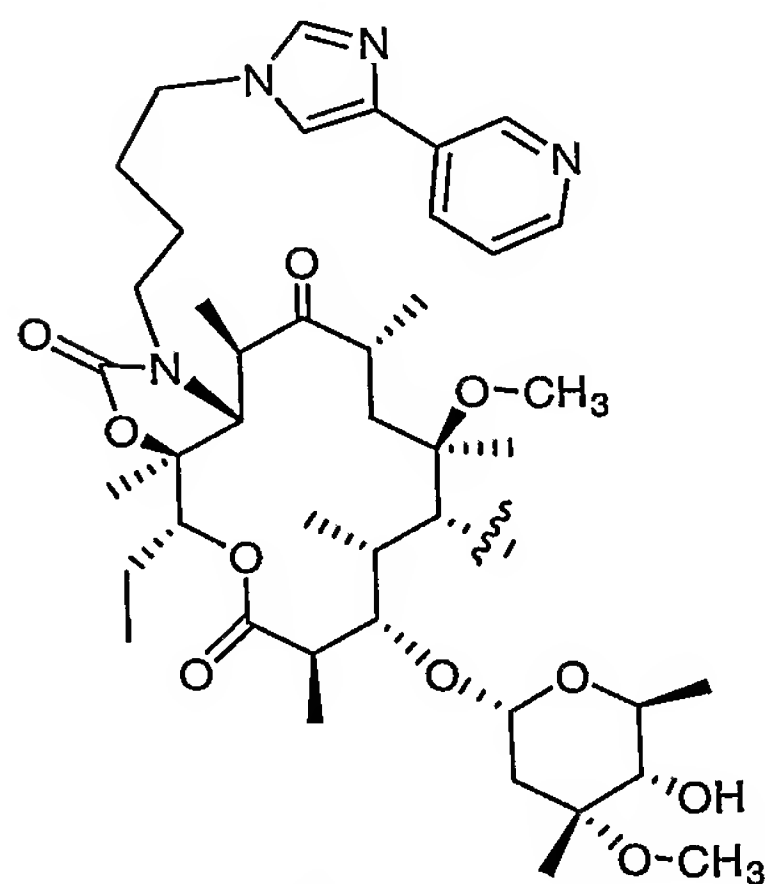
T11



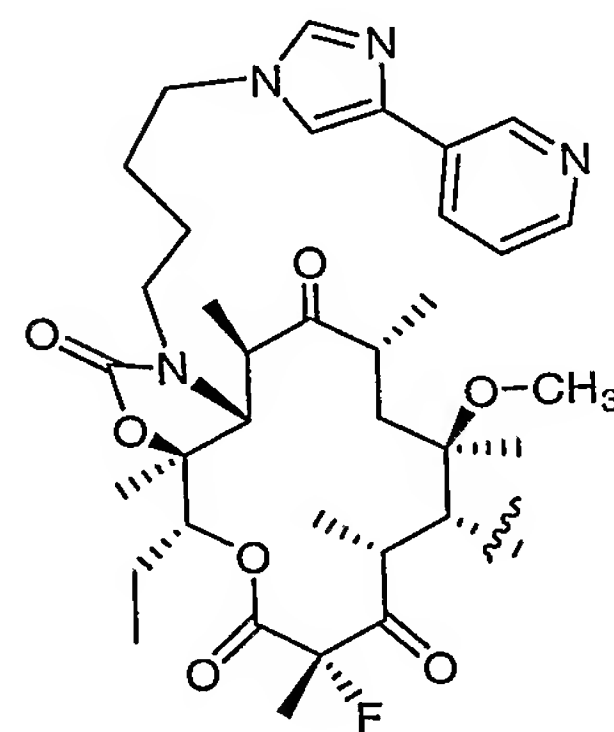
T12



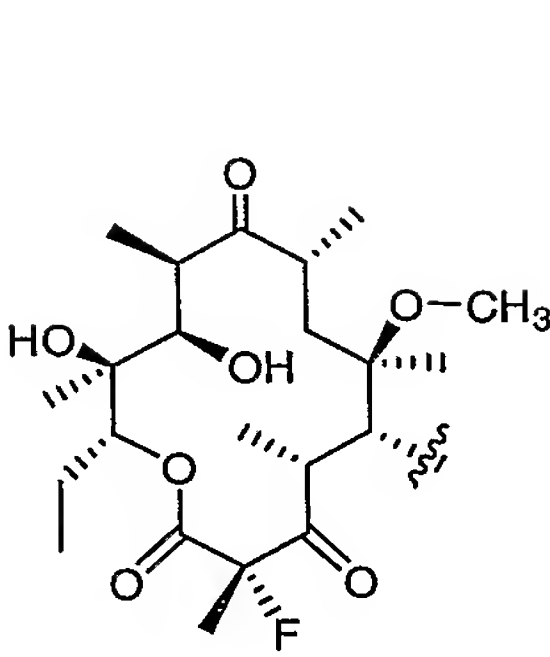
T13



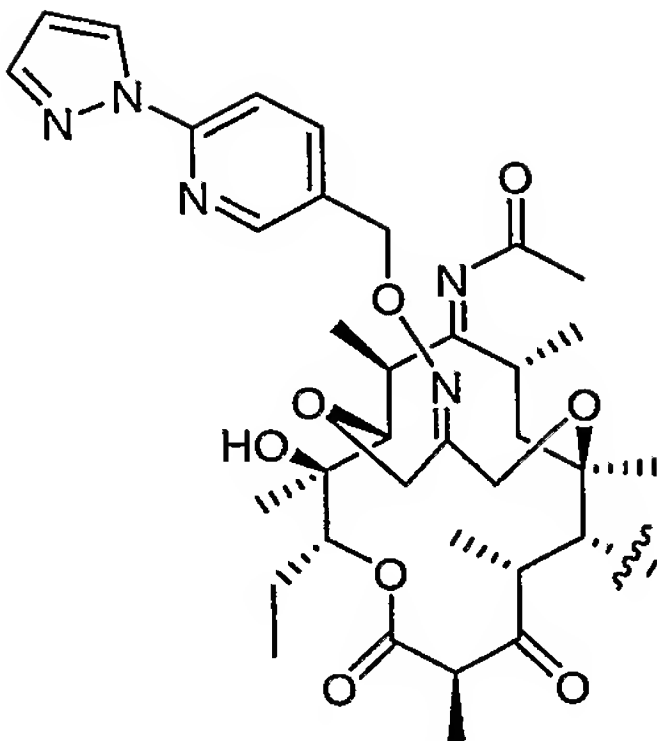
T14



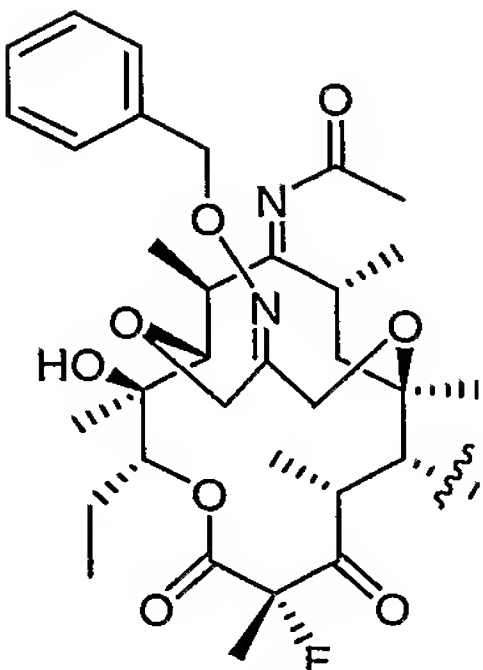
T15



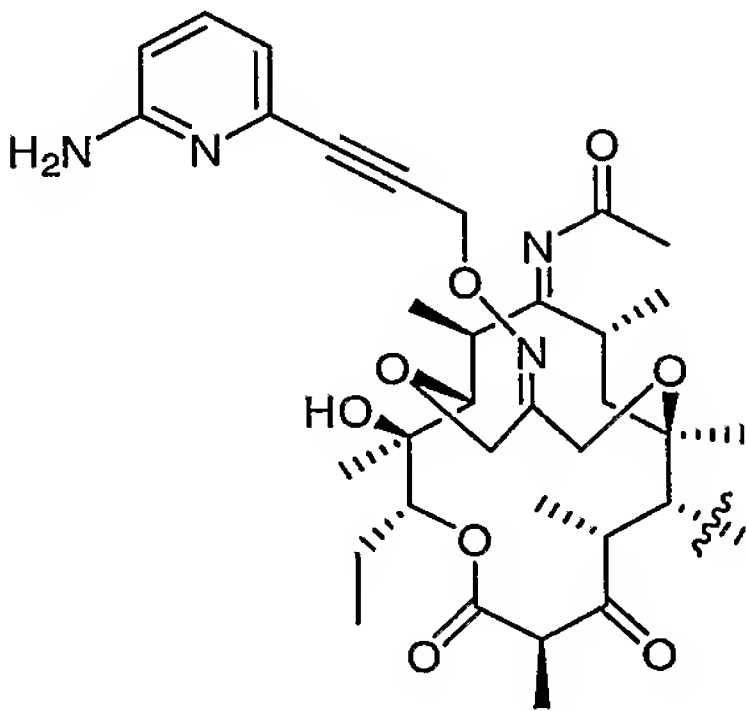
T16



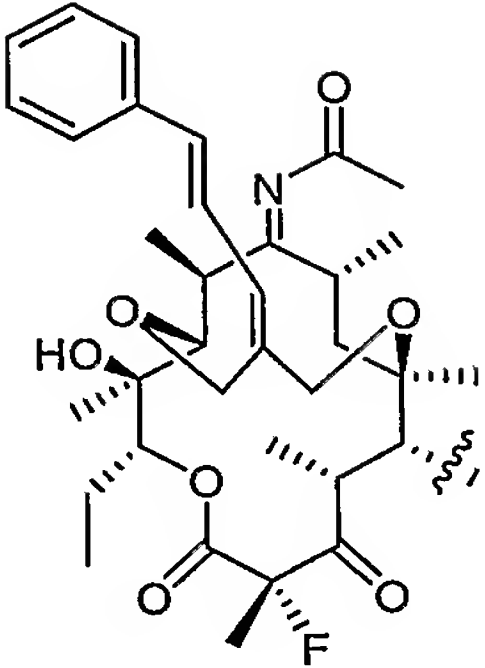
T17



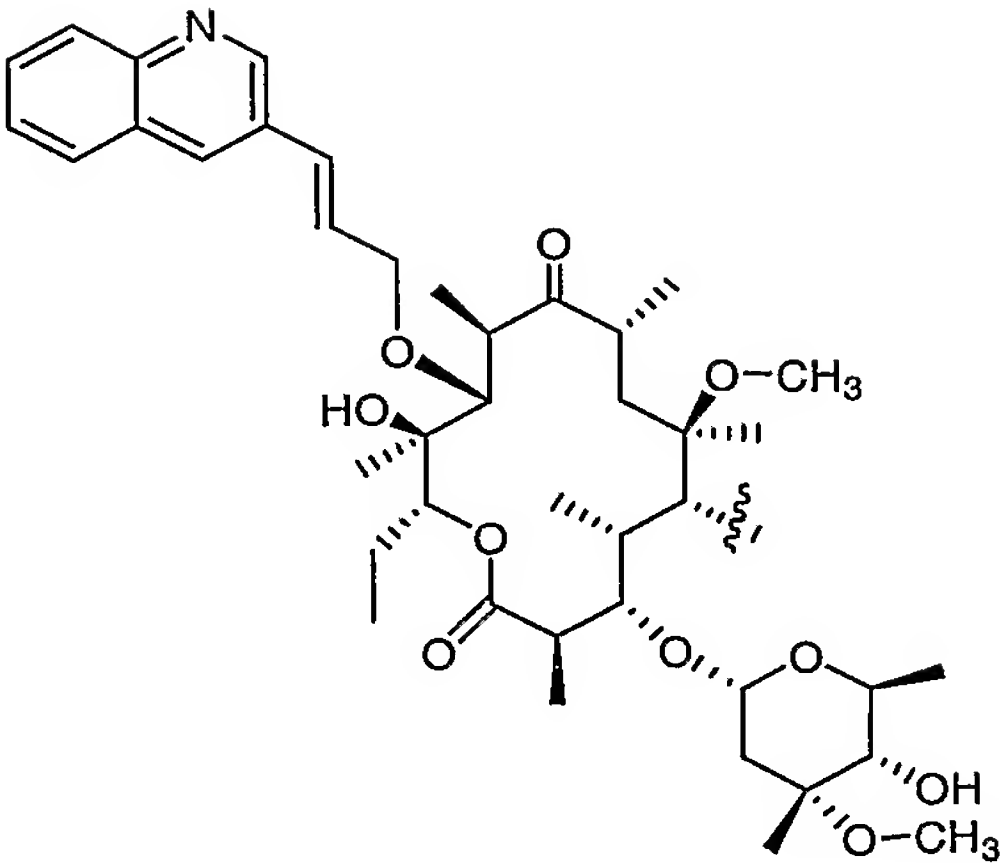
T18



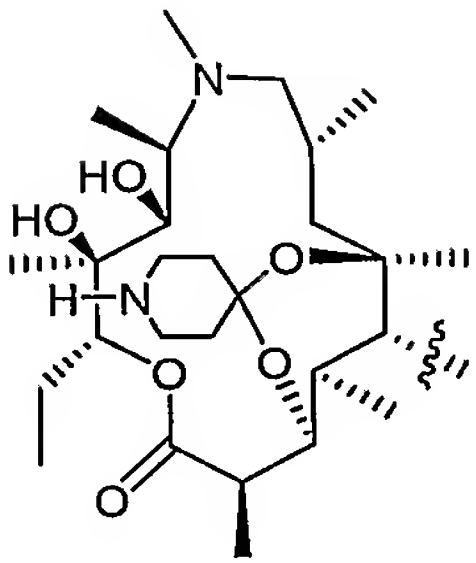
T19



T20



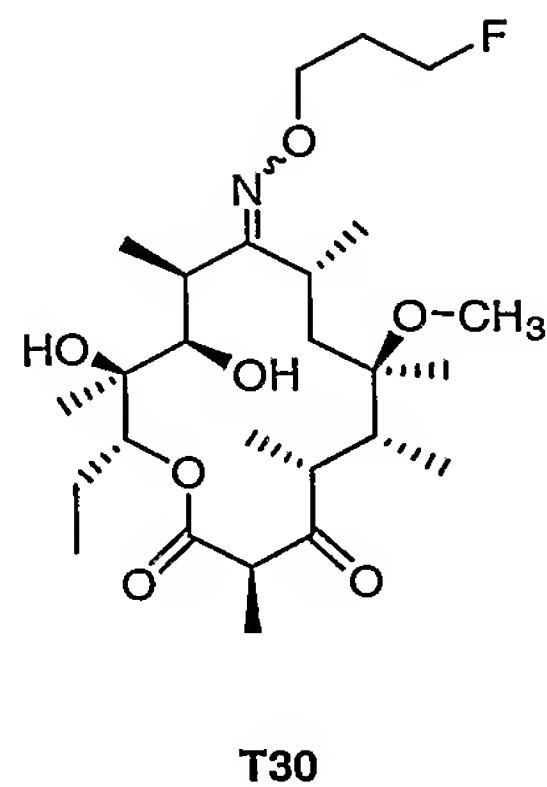
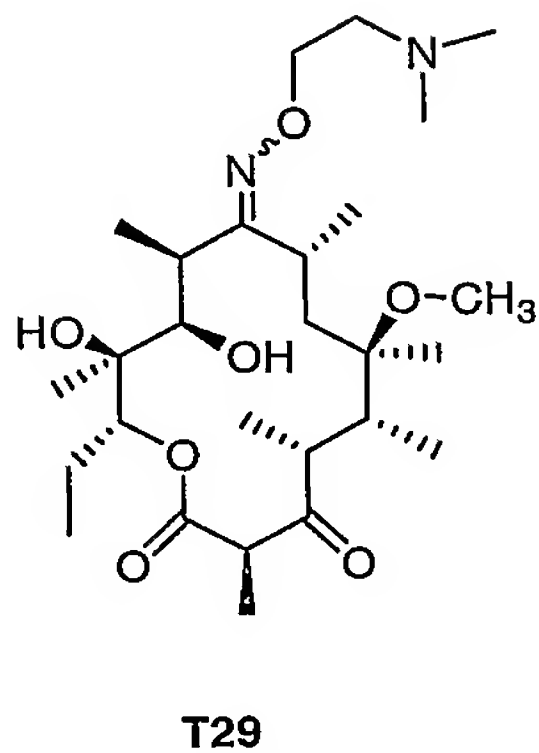
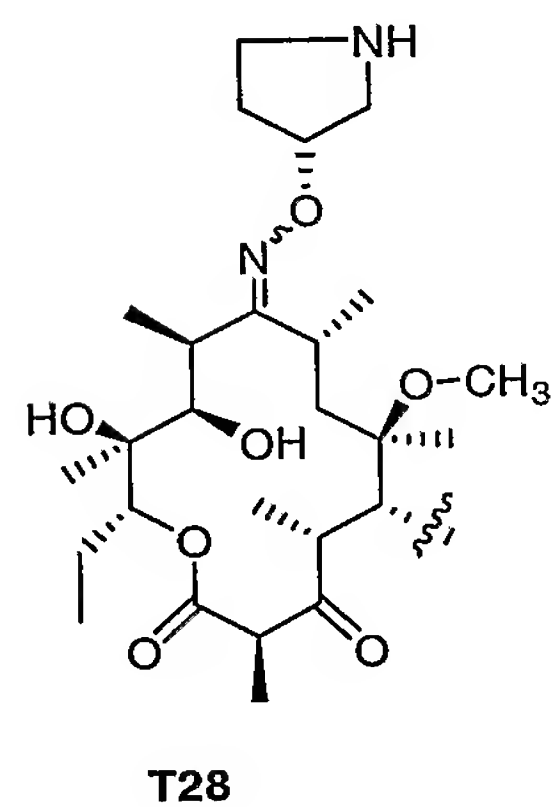
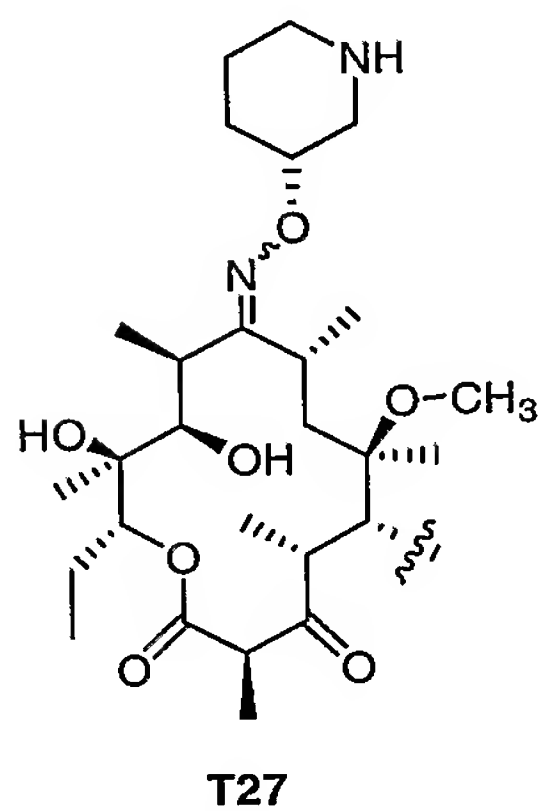
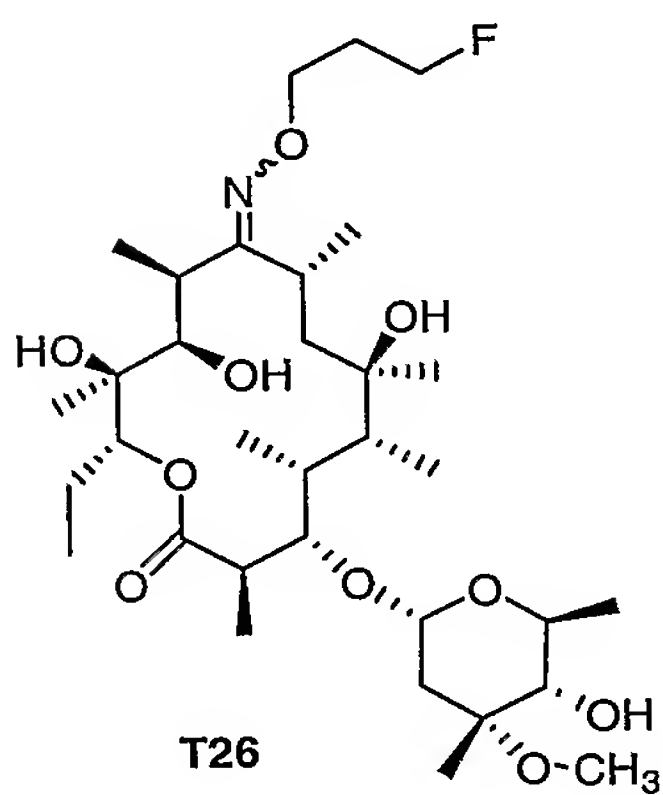
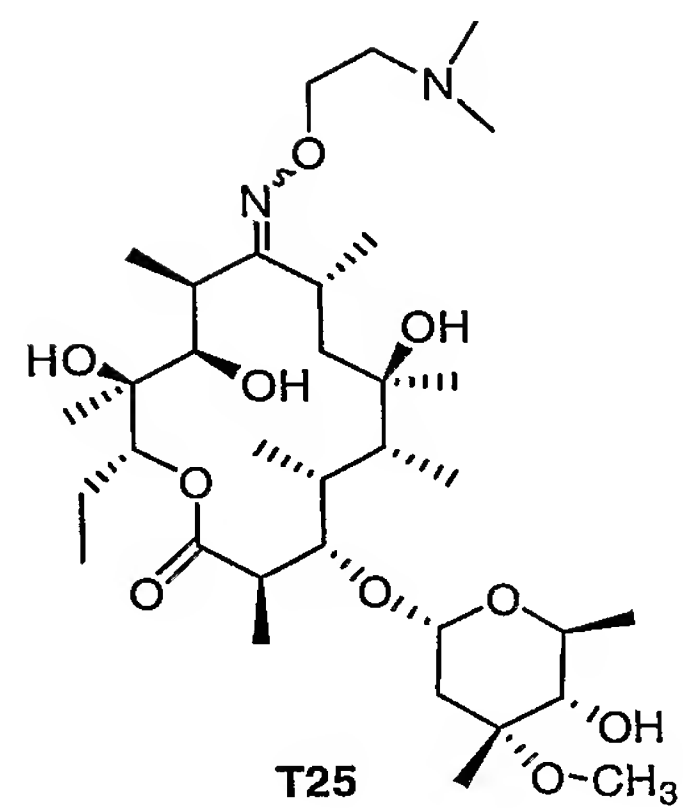
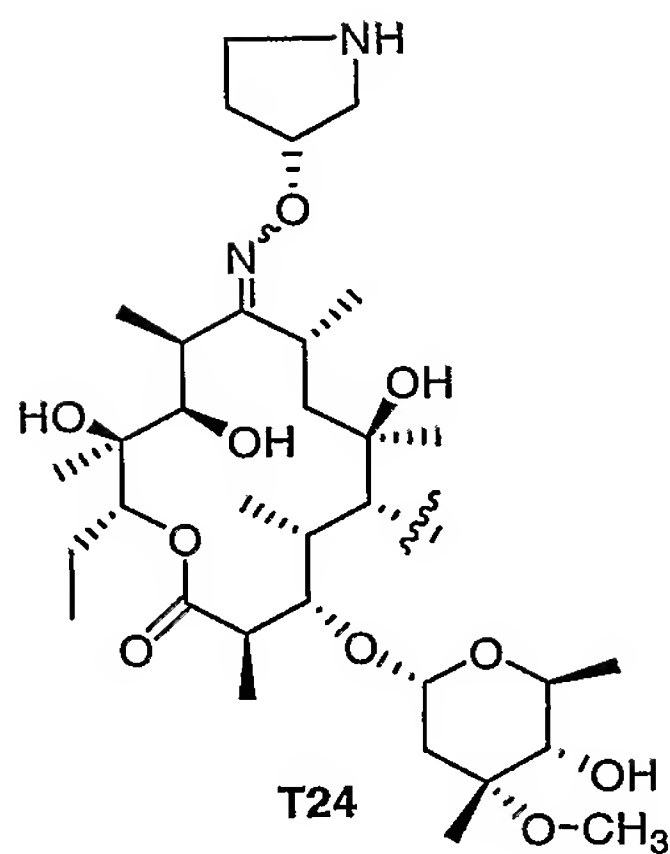
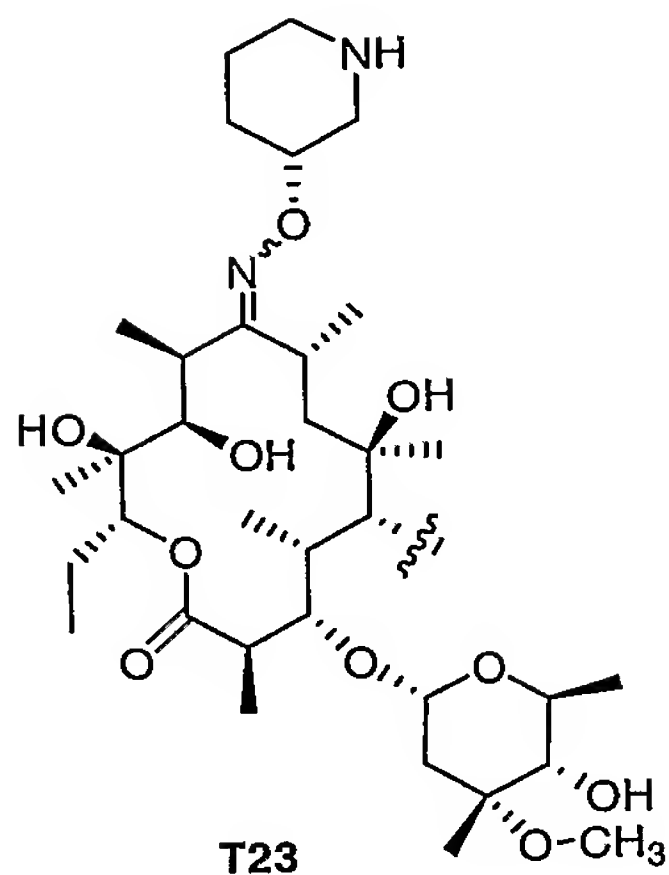
T21



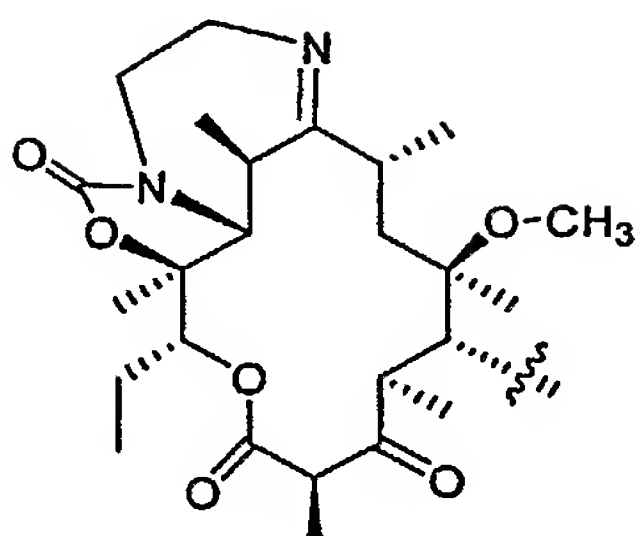
T22

;

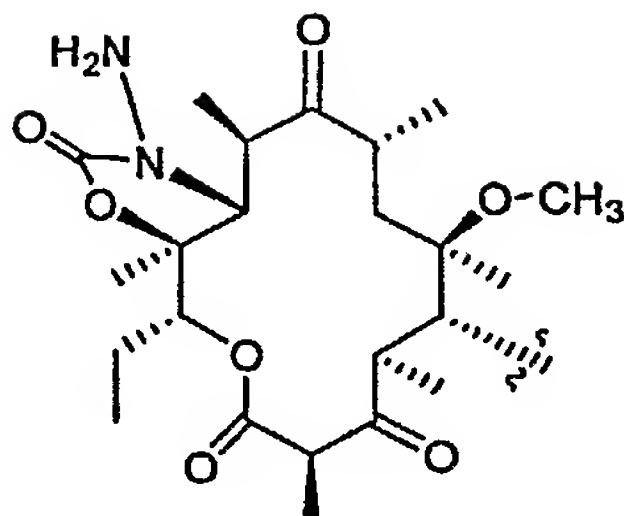
- 330 -



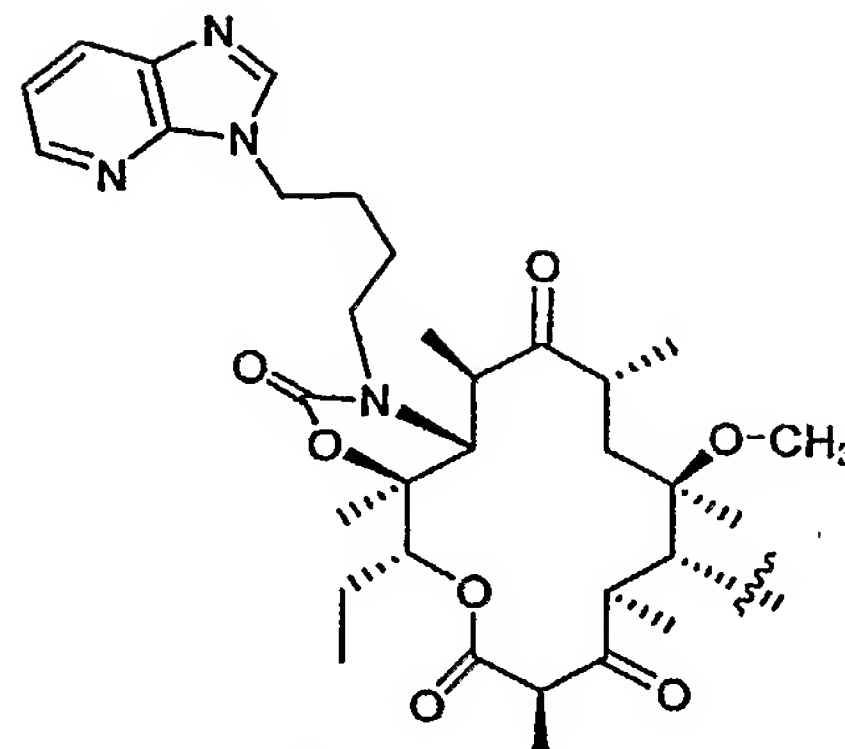
- 331 -



T31



T32



T33

18. A compound having the structure corresponding to any one of the structures listed in Table 1 or 13, or a pharmaceutically acceptable salt, ester, *N*-oxide, or prodrug thereof.

19. A pharmaceutical composition comprising a compound according to any one of claims 1-18 and a pharmaceutically acceptable carrier.

20. A method for treating or preventing a disease state in a mammal comprising administering to a mammal in need thereof an effective amount of a compound according to any one of claims 1-18.

21. A method of treating a microbial infection in a mammal comprising administering to the mammal an effective amount of a compound according to any one of claims 1-18.

22. A method of treating a fungal infection in a mammal comprising administering to the mammal an effective amount of a compound according to any one of claims 1-18.

23. A method of treating a parasitic disease in a mammal comprising administering to the mammal an effective amount of a compound according to any one of claims 1-18.

24. A method of treating a proliferative disease in a mammal comprising administering to the mammal an effective amount of a compound according to any one of claims 1-18.

25. A method of treating a viral infection in a mammal comprising administering to the mammal an effective amount of a compound according to any one of claims 1-18.

26. A method of treating an inflammatory disease in a mammal comprising administering to the mammal an effective amount of a compound according to any one of claims 1-18.

- 332 -

1 27. A method of treating a gastrointestinal motility disorder in a mammal comprising
2 administering to the mammal an effective amount of a compound according to any one of claims
3 1-18.

1 28. A method of treating or preventing a disease state in a mammal caused or
2 mediated by a nonsense or missense mutation comprising administering to a mammal in need
3 thereof an effective amount of a compound according to any one of claims 1-18 to suppress
4 expression of the nonsense or missense mutation.

1 29. The method according to any one of claims 20-26 wherein the compound is
2 administered orally, parentally, or topically.

1 30. A method of synthesizing a compound according to any of claims 1-18.

1 31. A medical device containing a compound according to any one of claims 1-18.

1 32. The medical device according to claim 31, wherein the device is a stent.